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ABSTRACT

This report assesses the current situation of girls' participation in elementary education, suggesting approaches that may help increase girls' retention. It reviews research findings and conventional wisdom on constraints affecting girls' schooling and examines initiatives that have attempted to increase girls' retention. Chapter 1, "Introduction," describes why girls' retention is important and defines the scope and approach of the report. It also examines the issue of girls' retention internationally. Chapter 2, "Influencing Girls' Participation," examines influences generally believed to affect girls' participation, emphasizing those that are important after initial enrollment. Chapter 3, "Initiatives to Encourage Girls' Participation," describes initiatives that have been employed in various countries to increase girls' retention. Chapter 4, "Promising Strategies and Implementation Models," describes four basic strategies with potential for removing many of the constraints on girls' education and suggests two implementation models (one which outlines a process approach to addressing education problems and one which assumes a world where institutions are shaped according to market forces to achieve their objectives). Chapter 5 presents "Summary and Conclusions." Case studies from Egypt, Honduras, Mali, and Pakistan are appended. (Contains 236 bibliographic references.) (SM)

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Starting Now

strategies for helping girls complete primary

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Starting Now:

Strategies for Helping Girls Complete Primary

Andrea Rugh

November 2000

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Executive summary

This paper is intended as a practical reference for educators interested in helping girls stay in school to the end of the primary level. The information and the approaches presented here are a distillation of existing literature and field experience. The argument underlying this paper is that investing in girls' education (and increasing the returns on this investment for nations and families) requires that attention be paid to balancing access and quality. Even more, improving program quality and the modes of the delivery of education are the most cost-effective ways to expand access to educational opportunities, and ensure that children—especially girls—will want to stay in school until the end of the primary level.

The benefits of schooling girls are well known. The more that girls participate in formal schooling, the greater the improvements in the nation's development indicators. The benefits increase with each level of education, and surprisingly this happens independent of the quality or content of academic programs. Not so encouraging is the fact that private returns lag behind social returns so that parents and their daughters are less apt to perceive the personal benefits of schooling. Moreover, many primary programs are of such uniformly poor quality that they do not compensate for such disadvantages in family background as poverty and illiteracy, leaving the next generation in roughly the same condition as its parents. Girls suffer greater educational disadvantage from these background characteristics than boys do, and therefore they are doubly disadvantaged by poor school quality. Logic suggests development results would be enhanced if academic programs proved better at imparting basic skills and providing relevant development information to all children. Girls who feel capable of academic success and who acquire knowledge relevant to their daily lives are more likely to want to continue on to higher stages of education.

Although focusing mainly on primary education, this paper suggests the added importance of removing obstacles at the end of the primary stage that make it difficult for girls to continue. Doing so not only encourages girls to aspire to higher educational levels, but also encourages them to complete the primary level. The important point is that girls' retention is not sufficient as an aim in itself. Rather, it needs to be considered in light of the important benefits girls will obtain by continuing their education.

The discussion starts with a description of the "shape" of the girls' retention problem. Overall females have lower rates of educational participation than males. One-quarter of 6- to 11-year-old girls remain out of school, constituting roughly 60 percent of all out-of-school children. This number is expected to double to 85 million by 2015 compared to 1990. A closer look at the data, however, shows

that a generalized female disadvantage in education is confined mainly to Western and Central Africa, North Africa, and South Asia (Filmer 1999). Much more widespread, as Filmer (1999) points out, is the wealth disadvantage he finds in every country (38 in all) he reviews, a disadvantage that is often exacerbated by being female. Other disenfranchised groups where being female deepens the disadvantage are rural populations and ethnic minorities.

Patterns of participation, including initial enrollment, repetition, dropout, and transition to higher levels of education frequently suggest reasons why girls are not completing primary education. If initial enrollment is poor, as in Mali, one should look for barriers to access. If dropout peaks before the second grade, as in Pakistan, one might look at the suitability of first-grade programs. If dropout peaks at the end of grade 5 or the beginning of grade 6 (in a six-year system), one might ask whether national exams are intimidating children, especially those with no intention of continuing to higher stages of education. If dropout peaks after completion of exams but before entering the next stage of schooling, as in Indonesia, one should again examine accessibility issues.

The constraints believed to affect girls' participation are numerous. Unfortunately even when they can be fairly well substantiated in one context, they may not be the same in another context or even in the same context a few years later. Attitudes are particularly unreliable, since they may be affected by prevailing sentiment or adjusted to fit the perceived expectations of the researcher. The chapter on constraints suggests that there are three conditions that increase the likelihood of girls' participation and retention. These are that:

- schooling opportunities are accessible (physically, psychologically, and institutionally);
- parents are positively inclined to their daughters' education and are willing to bear the costs; and
- girls themselves are willing to attend and stay in school.

If girls are not continuing to the end of primary, and if one or more of these conditions is absent, then the reader can review conventional wisdom about potential subfactors of these missing conditions to identify the constraints.

Initiatives mounted to address constraints preventing girls' participation are also numerous, ranging from small targeted efforts to broad-scale efforts at national levels. Some are aimed at all children and some have the specific intention of mainly increasing girls' participation. A major focus has involved expanding opportunities through the provision of school buildings, through construction projects, cost-sharing

arrangements with communities, or the use of interim facilities. The emphasis on buildings may have slowed the widespread distribution of opportunities by making school construction the prerequisite for the provision of programs. At the very least, high construction costs have diverted funds and attention from issues of quality and relevance. Quality and quantity, as many have noted, do not need to be mutually exclusive, nor does spending on one necessarily have to lead to a deterioration in the other.

Another major focus of worldwide initiatives has been to increase community involvement in the establishment and maintenance of schools thereby overcoming attitudinal barriers to girls' education. These activities have met with mixed results. In many cases, girls' enrollment has increased in community schools, but it has often been difficult to sustain parental involvement and to create long-term relationships between governments and communities. Other initiatives have attempted to reduce the costs and increase the benefits of schooling as a way of encouraging parents to enroll their children. Although recent efforts to promote life skills materials are too new to show results, since they are a direct response to parental requests, it is assumed they will reduce complaints that programs only cater to urban needs. The initiatives aimed at improving the overall quality of the academic program have in general been disappointing for a number of reasons, the most important being the lack of coherence in learning components and an inadequate focus on learning results.

This paper suggests that certain obvious difficulties need to be overcome if girls are to complete the primary level and continue to higher levels. It may be more cost-effective to address these core constraints before moving to resolve unique sets of circumstances preventing their participation. The three basic strategies—which simultaneously address the reasons for investing in girls' education and retention—are:

- expanding schooling opportunities in a cost-effective way (demand usually exceeds supply in countries where girls' participation is low),
- improving the capacity of programs to increase skill levels, and
- providing relevant, practical content with potential to enhance development goals.

With the present state of limited resources, it makes sense to undertake these "grand" (but cost-effective) strategies that serve the many before focusing on the unique and often costly problems of the resistant few. The strategies described in this paper suggest lower cost alternatives to school construction and practical ways to improve academic programs.

This paper also suggests two implementation models. One—a "process" model—details a series of steps that can be used systematically to address development problems. Although it is well known, its individual steps are rarely followed in full, and therein may lie its poor results. The model is based on the premise that problems need to be understood first, and appropriate programs developed and tested against results before an innovation is disseminated broadly. If a particular set of inputs, e.g., teacher training, instructional materials, supervision, and school management, does not improve learning, then its parts need to be reexamined and modified until they do. This model, when used in conjunction with the model described below, can serve as a framework for solving educational problems, both in the short and long terms.

The second model is suggested by several recent trends in the delivery of primary education around the world (see for example elements of community schools in Mali, BRAC in Bangladesh, CSP in Pakistan, GABLE in Malawi, and *Fe y Alegría* in a number of Latin American countries). Although the description makes the model appear radical at the moment, it may eventually prove inevitable in the context of ever-increasing populations of school-aged children and shrinking budgets. This "accountability" model suggests taking advantage of techniques that have been employed by the private sector to produce results cost-effectively and efficiently. It calls for management of educational institutions to focus on "customer" programs and services, and a system of outsourcing production, delivery, and support of school programs to private firms or individuals who manifest a competitive edge over others. Ministries would be responsible for seamless coordination of outsourced parts and would sustain control over the assessment and credentializing of program results. Parents, as customers, would choose courses that fit their needs, and would financially support them. They would receive periodic evaluation results to help inform their decisions. Equity of opportunity could be handled by government subsidies for programs targeted at disadvantaged groups. Programs perceived to be of most benefit to the nation might also be subsidized to encourage their adoption. A series of personnel incentives would be used to motivate staff and encourage more highly skilled people to enter education service.

These ideas are meant to describe how private sector techniques might be cost-effectively applied to the education sector, and not to suggest a final form for their adoption. The aim is to develop institutional structures that encourage desired behavior and discourage inefficient, ineffective behaviors without creating a punitive environment in which to implement them. Already market-forces are creating some of these structures. Significant advances are about to appear on the scene in

the form of satellite transmissions that have the capacity to broadcast educational programs anywhere in the world. Having a vision of how a more receptive climate in educational institutions might productively bring these innovations together will help to make the transition easier. Without such a vision, the gap will continue to widen between countries that have taken advantage of new technologies and methods and those that have not.

How do these models affect constraints on girls' education? The process model allows us to identify the problems of and the solutions for girls' education more precisely and ensure that the interventions produce the results we expect before disseminating them widely. It reminds us that any "solution" is an approximation needing continual monitoring and adjustment. The second model serves girls by making resources more available and program delivery more flexible, efficient, and effective. It allows governments to widen the pool of resources from which they draw, including most importantly for sources of talent, expertise, and funding. With competition to reach all clients and greater emphasis on results and accountability, girls as well as boys are certain to benefit. In short, the more resources are made available by cost-savings, the more widely educational opportunities can be distributed; the more flexible the delivery system, the more likely girls will continue to participate; the better the children's learning, the more they and the nation will benefit; the more parents recognize the benefits of education, the more they will be willing to send and keep their daughters in school.

1. Introduction

Beverly Jones, AED

The aim of this monograph is to assess the current situation of girls' participation in primary education and to suggest approaches that may be useful in increasing girls' retention. It reviews research findings and conventional wisdom on constraints affecting girls' schooling and examines initiatives that have attempted to increase girls' retention. The intent is to provide a thoughtful guide to practitioners on how they might proceed given the present state of knowledge. The aim is not to duplicate the efforts of others who have made thorough reviews of primary source literature on girls' participation. As one such review notes:

> ...in few other areas of investment in which potential is so high, good will and commitment present, and donor support enthusiastic can there be so serious a lack of information on how best to proceed. (Kane and Yoder 1998: 3)

This study tries to address this need using the wealth of information now available in the literature on girls' education and from the author's own field experiences.[1] It would be a mistake for this paper to give the impression that the literature[2] or the experiences of one author are enough to produce any final answers, yet it does seem possible now to formulate a few approaches with sufficient potential to produce results. With well-defined objectives for girls' participation coupled with past project experience and an experimental approach, it seems feasible to start the task.

This paper has five chapters. Chapter 1 describes why girls' retention is important and defines the scope and approach of the manuscript. It also sketches the broad international "shape" of the girls' retention problem. Chapter 2 examines influences generally believed to affect girls' participation with an emphasis on those that are important after initial enrollment occurs. Chapter 3 describes initiatives that have been employed in various countries to increase girls' retention.

Building on this base, Chapter 4 describes four basic strategies with potential for removing many of the constraints on girls' education and suggests two implementation models. The first outlines a "process" approach for addressing education problems. This model is suitable for use in most of the bureaucratic environments that exist today—once political will is mobilized to support initiatives of this kind. The second model assumes a world where institutions are shaped according to market forces to achieve their objectives. While this model may not be entirely achievable in the present bureaucratic and political climate,

[1] For field experiences I draw on my involvement in donor-supported initiatives in Afghanistan, Egypt, India, Malawi, Mali, Nepal, Pakistan, and Yemen. I have also worked on the design of projects being implemented in Morocco and Bangladesh.

[2] See Kane and Yoder 1998, pp. 7–8 for a summary of some of the gaps in the literature. On p. 9 they also note that there is insufficient evidence on which to make informed judgment about strategies from this literature.

parts of it are already operative in countries where clients have been unhappy with the kind or level of educational service they receive. Chapter 5 presents a summary and conclusions.

The Annexes offer four examples of countries—Egypt, Mali, Honduras, and Pakistan—that have grappled with questions of girls' education in ways that shed light on approaches used to address these issues. Their experiences are varied. One, Pakistan, has the second largest gender gap in the world, and consequently low levels of overall enrollment. Two, Egypt and Mali, have moderate gender gaps for different reasons. Egypt has made steady progress in enrolling large segments of the age-relevant population and in closing its gender gap, while the other, Mali, enrolls few children of either sex. On paper Honduras has no gender gap to speak of at the primary level but has a poor record for both sexes in primary completion.

Background

Why is girls' retention important?

Encouraging girls to remain in school until they complete primary education has increasingly become a priority of national and international communities. Research has shown the economic and social benefits of girls' education. With increases in the educational participation of girls, the main national development indicators improve. Some important ones are lowered infant and maternal mortality, longer life expectancy, lower fertility rates, and improvements in health, nutrition, literacy, and economic growth. In addition there are advantages passed on by educated women to their families—better health, nutrition, higher income,[3] and the increased educational attainment of younger generations. Domestic, industrial, and agricultural productivity improves, and there is often greater participation in civil society (Floro and Wolf 1990, King and Hill 1993, and others).[4] Overall, countries with the highest educational participation of females evidence the highest levels of economic development.

The greater investment returns realized from educating girls has caused many national officials and international donors to focus scarce resources on girls' participation, rationalizing that since girls normally make up a larger proportion of non-enrolled children than do boys, steps to improve girls' participation will increase boys' participation as well. This approach continues despite the growing consensus that programs must not ignore educationally disadvantaged boys, and certainly

[3] For example "...[There is] evidence that graduates of a six-year primary cycle earn much more than students who have completed only five years, and that there are small differences in earnings between school leavers with three or four or five years of primary school" (McGinn in Cuadra 1989: iii).

[4] One of the latest findings from Egypt is that girls who have one parent with at least 11 years of schooling are considerably less likely to have been subjected to circumcision (48 percent compared to 84 percent for those who complete primary/any preparatory) (Ibrahim et al. 2000: 157).

should not support girls to the exclusion of boys.[5] The rationale for continuing to focus on girls within the context of basic education reform continues to be the simple one: the higher development returns to national investment that accompany the education of girls.

The development advantages cited above tend to improve with girls' completion of each education level.[6] The relationship between completion of different stages of education and the indicators has been studied and confirmed a number of times. In developing countries, although the greatest investment returns are derived from primary education (24 percent on average), there are also returns for secondary (15 percent)[7] and higher education (12 percent), and these averages are higher across the board for the lowest income countries (World Bank 1986: 7).

Strangely, the improvements in development indicators occur even when education programs are weak and specific information—on health, nutrition and other topics that would appear necessary to those improvements—is absent from the content of education programs.[8] The mechanisms that link education and development indicators until now are not entirely clear. Some suggest they result from important, if not widely recognized, increases in self-esteem that women gain from becoming "educated people." Perhaps it is because school settings provide girls' with role models for new behaviors. Or maybe girl-students are permitted relative independence of action and come to know how to access services. Maybe it is the consequence of having to meet responsibilities and maintain a more organized lifestyle, or because they are involved in networks of informed people who serve as knowledge communicators. Studies have shown that adolescence is a time when critical decisions are made that affect adult lives (see Ibrahim et al. 2000). Understanding better the mechanisms whereby education is converted into improved development indicators could make it possible to enhance the already known positive effects of retaining girls longer in school.[9]

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[5] Some have claimed that in almost every education measure available, boys are more disadvantaged than girls in the United States. The myth of girls' disadvantage, however, continues to persist and is supported by programs to redress their "difficulties" while those affecting boys go largely unaddressed. (See *Atlantic Monthly*, April 2000, for a compilation of research findings about male disadvantage in U.S. schools.)

[6] See Subbarao and Raney (1993) for the impact of women's secondary education on social indicators.

[7] According to Barbara Herz, in USAID's *Symposium on Girls' Education* (May 17–18, 2000), it appears that secondary education may have much larger returns—as much as 30 percent. Therefore, ensuring that girls reach this stage may produce even larger benefits.

[8] Colclough (1980) notes, "even if resources are scarce, and if the affordable quality of schooling is low, a further extension of the coverage of primary education can still be expected to bring benefits." In support of this contention that increasing access is important anyway, he says, "individual behavioral changes that result from schooling are stronger when the schooling is widely spread than when it is more concentrated"(20).

[9] This information comes from observations in Nepal and Egypt. Similar suggestions have been made in the book *A Place to Live: Families and Child Health in a Cairo Neighborhood*," by Fred Shorter, Linda Oldham, and Belgin Tekce (1994), American University in Cairo Press. This was an intensive study of the factors affecting child health, including mothers' education. Hamamsy (1994) also says "Education separates women into two distinct categories from whom different behavior patterns are expected." As example, an educated woman can wait to marry while an uneducated woman is pressured to marry early (46).

Perhaps it is even more important to encourage girls to stay in school longer for equity and personal reasons. If, on the whole, more girls than boys drop out of school sooner and are therefore less likely to complete essential stages of education, they will also be less equipped with the skills to live fully productive adult lives, whether in domestic or public roles. It is difficult to know how a decision today not to enroll or to retain children may affect their lives 20 years from now.

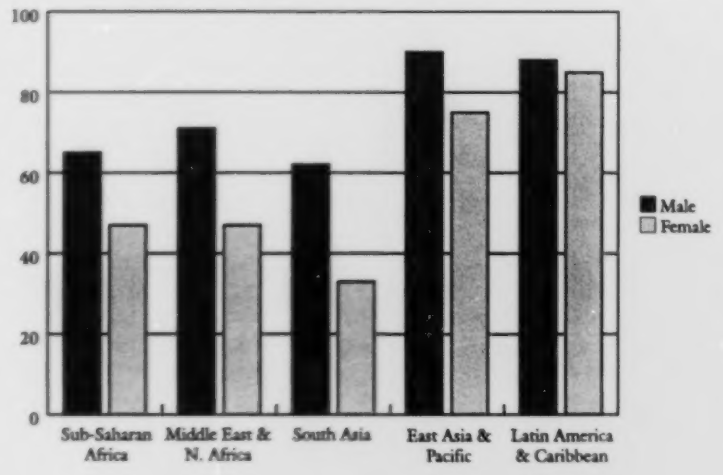
What is clear is that the private rates of return for educating girls lags behind the social benefits to society (Miske and Prouty 1997: 2). Were these returns to increase—if they were to develop better skills and improve their employability—it is possible they would be willing to invest more time and resources in schooling.

To summarize, several conclusions can be reliably drawn from the experiences of girls' participation. First, the earlier focus on initial enrollment was not enough to ensure that girls would remain a sufficiently long enough period in school to derive the full benefits of education. Evidence is mounting that "education beyond basic education is necessary in order to achieve appreciable changes in behavior" (Ibrahim et al. 2000: 157). Second, many academic programs are of such poor quality that the potential benefits of schooling are eroded. In many countries socioeconomic background remains the strongest predictor of cognitive outcomes, because programs are so uniformly poor that they are unable to reduce the inequities of background (Fergany et al. 1996). Third, even good programs lack health, nutrition, and other relevant information that might enhance the development outcomes of educating girls. Overall, while the social returns of investing in girls have been high, the private returns have not been commensurate; consequently, it has sometimes been difficult for girls and their parents to see the benefits of extended education.

> The most costly item of schooling is buildings. School *venues* are important but school *buildings* are not. Schooling can take place almost anywhere—in a home, community hall, or under a tree. Removing the cost of construction would provide major relief to school budgets of many developing countries. The same may be true for the costly and "theoretical" preservice teacher training that studies have shown may not be as effective as short orientation followed by inservice training.

The logic of this evidence suggests that the objectives of girls' educational participation need to be expanded from the aim of simply enrolling girls, to retaining them as long as possible, and of providing them better and more relevant programs. As Fuller notes, "The economic returns from improvements in school quality are comparable to those from school expansion" (1986: iii). The issue becomes not one of how much education girls need but how much education they, their

Fig. 1: Adult Literacy Rate (%), 1995



Source: *The State of the World's Children 2000*, UNICEF, New York.

families, and the nation can afford.[10] This aim of aspiring to higher stages of education has additional quality implications. Girls cannot attain higher levels of schooling without mastering the basic academic skills required to enroll in them. With each increase in level she completes, we are assured, the benefits for national development increase.

Logic also tells us that improving academic programs to include better skill development and more program content related to health, nutrition, and other desired outcomes is likely to improve further the impact on development indicators[11] and possibly increase the private benefits[12] girls receive from education. That in turn may increase the motivation of parents to keep their girls in school and of girls to stay in school. Improving program quality is likely to have the additional benefit to the nation of reducing the inequities of wealth, region, and ethnicity where the educational disadvantage of girls is usually more severe.

What is the magnitude and shape of the problem?

Looked at as a whole, females have lower rates of educational participation than males. Of the 960 million illiterates in the world two-thirds are female. Figure 1 shows the adult literacy rates in 1995 for five regions of the world. Since 1980, the gender gap has narrowed in four regions while increasing slightly in the fifth, South Asia.

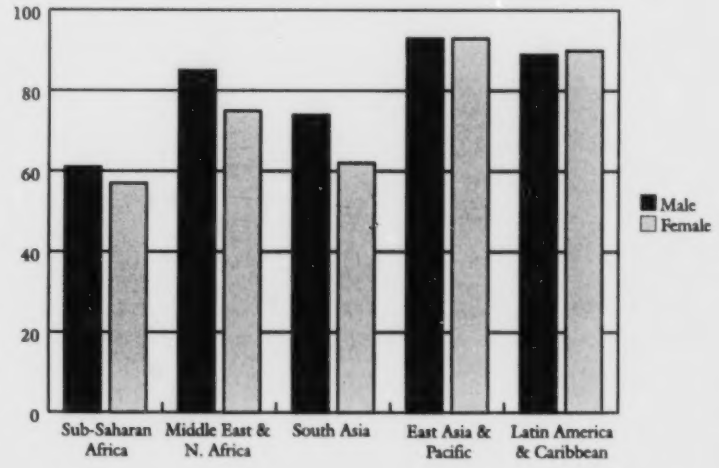
Nearly a quarter of the world's population of 6- to 11-year-old girls—85 million—remain out of school, constituting roughly 60 percent of all out-of-school children in the age group. The total number of out-of-school girls is projected to double by the year 2015 compared with 1990 rates.

[10] *There is a basic minimum of schooling necessary if improvements in some indicators are to be realized.* By the end of primary education, for example, the rise in fertility that peaks in women with three or four years of schooling begins a substantial decline (Colclough 1980: 14). Functional literacy skills also are not usually achieved before grades 4 or 5.

[11] Colclough notes that although social benefits are always correlated in studies with "years of schooling", they might be increased—especially in rural areas—by changing the content or achieving learning objectives more effectively through alternative approaches (1980: 16).

[12] Schultz (1993) notes that private "benefits are not captured by private rates of return analysis but should be taken into account in setting government spending priorities" (9).

Fig. 2: Net Primary School Attendance Ratio (%), 1990–1998



Source: *The State of the World's Children 2000,* UNICEF, New York.

Figure 2 shows that primary participation varies by region. The "primary school attendance ratios" used to calculate the bar graphs in this figure are based on Demographic Health Surveys (DHS) data that may be more accurate than official gross or net primary participation ratios. The figures show the lowest rate of participation in sub-Saharan Africa and the largest gender gap in South Asia. East Asia and Latin America have high rates of participation for both boys and girls, and in the latter there is even a small gender gap favoring girls. To focus the problem further, the largest disadvantage (not shown here) for females is found mainly in Western and Central Africa, North Africa and South Asia.[13]

With each successive stage of education the rates of overall participation decline. Figure 3 shows gross secondary school enrollments.[14] Again, rates of secondary participation are lowest in sub-Saharan Africa and the largest gender gap exists in South Asia. Girls have higher participation rates than boys in Latin America.

Rates of completion also vary from region to region. Figure 4 shows the ratio of grade one entrants reaching grade five. South Asia has the lowest rates and the Middle East and North Africa and East Asia have the highest rates of completion. The patterns of regional disadvantage in higher stages generally follow the patterns of enrollment above. When broken down they are found to exist mainly in Western and Central Africa, North Africa, and South Asia, but this time include Mozambique and Turkey (Filmer 1999: 19).

Statistical breakdowns by country show a variability in patterns of schooling participation. In countries such as Brazil almost all children complete grade 1 while considerably fewer complete grade 6. In others such as India, considerably fewer complete grade 1, but once they do

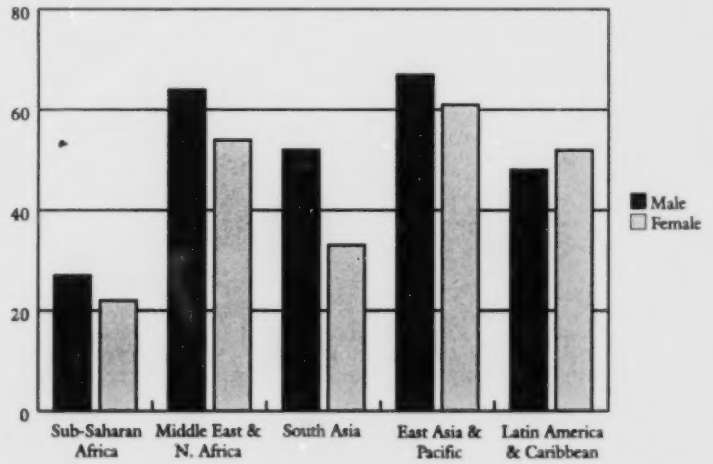
[13] Filmer 1999 ranks 38 developing countries by region into eight categories from the lowest to highest enrollments of girls ages 6 to 14: 1) Western and Central Africa, 2) North Africa, 3) South Asia, 4) Eastern and Southern Africa, 5) Central America and the Caribbean, 6) East Asia and the Pacific, 7) South America, and 8) Middle East and Central Asia.

[14] Gross enrollment rates exaggerate participation because of under- and over-age children included. They are not comparable with figures in the previous paragraph.

few drop out before completing grade 6. In yet others such as Indonesia, a large percentage complete grade 6, but few complete the first year of secondary school (Filmer 1999, World Bank Web site using DHS data). It is also common for dropout to peak at grades 3 or 4, as is the case in Pakistan and Southern Malawi,[15] or just before the end of the primary level.

These patterns signal where to look to identify significant underlying constraints. For example, if major dropout occurs at around grade 1, it is possible that the academic program or schooling environment is unattractive or poorly suited to the learning needs of young children. If dropout peaks at grades 3 or 4, one might expect it has something to do with approaching puberty (for girls) or increased earning potential (for boys). If it peaks just before the end of primary, one might suspect the intimidating effects of final exams on children who have no intention of continuing to higher levels. If dropout peaks before entering the next stage of schooling, one might look again (as at grade 1) to the accessibility of opportunities. The relationship between dropout patterns and specific constraints are of course not invariable but they have proven true enough times in the field to make them the obvious first place to look when identifying obstacles to retention.

Fig. 3: Gross Secondary School Enrollment Ratio (%), 1990–1996



Source: *The State of the World's Children 2000*, UNICEF, New York.

Grade repetition is also a significant indicator affecting eventual completion. McGinn (1992) notes three patterns for repeaters. Some countries such as Columbia, which is typical of Latin America, have high rates of repetition in the early grades (around 8 percent) and declining rates in higher grades (about 1 percent). Other countries such as Gambia have high rates throughout but with the highest rates in the last year just before or because of major promotional exams. Others such as Zimbabwe have low rates throughout (6). Dropout rates frequently parallel repetition rates as children become discouraged with schooling.

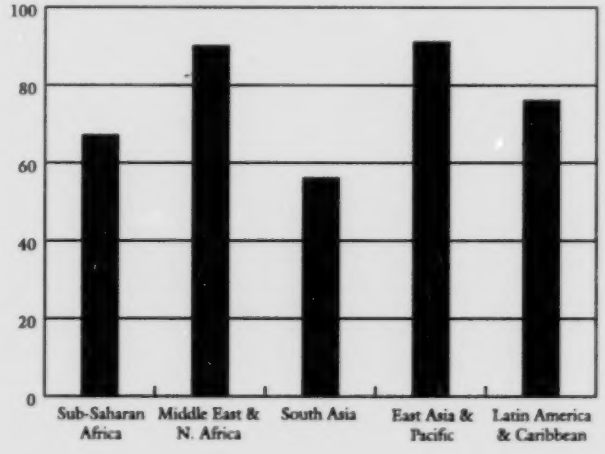
[15] Before incentives were introduced in Malawi that dropped school fees and gave scholarship support to secondary girls, both boys and girls had their highest dropout between first and second grade. Of the remaining students, dropout rates peaked for girls between grades 3 and 4 and for boys between grades 4 and 5.

Gender differences in retention can also be seen in median grades completed by males and females aged 15–19 years. There are four basic patterns:

1. *Low overall (boys' and girls') attainment countries:* where the median grades completed by both boys and girls are no more than a few weeks of school (Senegal 1992, Niger 1997, Mali 1995, and Burkina Faso 1992).
2. *Low girls' attainment countries:* where girls complete only a few weeks compared to boys completing anywhere from two to six years of schooling (Chad 1996, Benin 1996, Pakistan 1990 and Nepal 1996).
3. *Modest girls' attainment countries:* eight countries where girls have attained between two and three years of schooling and boys with one exception (Madagascar with the same years as girls) have attained four or more, and eight countries where girls have attained four or five years of schooling, in five of which boys have attained one to three years more than girls and in three of which they are equal.
4. *High overall (boys and girls) attainment countries:* 17 countries, 16 where both sexes have completed six or more years of schooling and one (Namibia) where girls complete six years and boys only five (World Bank web site using DHS data).

Overall, of the 41 countries reported, girls in 41 percent (17) have completed median years equivalent to a primary education (assuming six years of primary) compared to 54 percent for boys. The critical countries from the perspective of girls' completion are the 24 countries in the first three categories of attainment. Sixteen of these countries are in sub-Saharan Africa, four are in South Asia, two are in the Middle East and North Africa, and two are in Latin America and the Caribbean.

Fig. 4: Primary School Entrants Reaching Grade 5 (%), 1990–1995



Source: *The State of the World's Children 2000,* UNICEF, New York.

Filmer confirms that the educational disadvantage of girls may not be a worldwide problem, but one that is localized by regions or countries. The subset of countries where the female disadvantage in enrollment among

Countries where girls' median years completed is fewer than six		
<1 yr	**2–4 yrs**	**5 yrs**
Mali	Mozambique	Rwanda
Niger	Central African Republic	Bangladesh
Senegal	Côte d'Ivoire	India
Burkina Faso	Madagascar	Turkey
Chad	Malawi	Guatemala
Benin	Togo	
Pakistan	Comoros	
Nepal	Uganda	
Cameroon		
Morocco		
Haiti		

6- to 11-year-olds is more than 10 percent includes Benin, Central African Republic, Côte d'Ivoire, Egypt, Morocco, India, Nepal and Pakistan. The same countries (except Egypt and Morocco) have a gap of more than 20 percent among 12- to 14-year-olds. Gender gaps that appear in older age groups tend to reflect previous gender gaps. In many other DHS countries (24 of 38) there is no gender gap among 6- to 11-year-olds (Filmer 1999: 10–12). Filmer points out (see Chapter 2) that countries still can have wealth gaps even when there is no statistical female disadvantage. Add the two together and the female disadvantage intensifies (Filmer 1999: 13).

The scope of this paper

This paper examines the issue of girls' retention to the end of the primary level (about grade 6). Governments frequently assume that completion of this stage gives children functional literacy and numeracy. The length of primary education may vary from as little as five years in some countries to as much as eight or nine years in others under the broader rubric of "basic education." Certain statistical documents use the term *primary level* as a contrast to *secondary level* education, and consequently it is difficult to find either a single internationally accepted definition of the length of primary education or statistics that can be reliably compared across countries.

Primary education also varies from country to country in the way it is presented. In some cases it may be divided into distinct lower and upper elementary stages, or into elementary and middle (intermediate) stages. Alternatively it may appear as a seamless stage that reaches from first (or preprimary) to sixth or eighth grade. The length of primary education and whether it is divided into discrete stages has important implications for girls' retention. Parents may remove their children from school during the transition between two distinct stages, especially if those stages are located in physically separated spaces, or if they are marked with other hurdles such as major promotional exams. For the most part, primary education is assumed here to comprise six years, although when useful for illustrative reasons, other definitions may be used to show how completion can be affected by the different arrangements of stages.

Primary education should not be confused with two other similar terms, ***basic education*** or ***compulsory education***. Basic education, a term used first by the United Nations, originally referred to the basic or essential educational needs of children rather than a period of time, and included functional literacy and numeracy, practical skills such as basic woodworking, agriculture, electrical repair, or plumbing that children could use in daily living. Compulsory education usually refers to the period of education that a nation determines all children must attend. Governments usually take responsibility for providing sufficient schooling opportunities for compulsory education, whether or not its duration is considered adequate to develop the skills citizens need for national development.

Definition of terms

The terms *participation*, *retention*, *persistence*, *attainment*, *completion*, and *access* have meanings that need clarification. In this paper, *participation* is the most encompassing term, meaning enrollment at any level. *Retention* means keeping children in school, as opposed to letting or encouraging them to drop out. (In countries where English is the main second language, retention often means grade repetition—but this is not the meaning used here.) *Persistence* implies a sense of volition or desire on the part of individuals to continue. *Attainment* implies arriving at a given schooling grade or level, or in the case of learning, achieving some expected mastery of skill. *Completion*, unless otherwise noted, implies finishing a particular grade or stage (primary, intermediate, or secondary).

Access is the most difficult term to define because of its multiple usages. Here it means the ability of a child to enter and continue in the schooling system, i.e., there are no obstacles, physical, psychological, parental, or institutional that would prevent her from doing so. The crucial points of access are the entry years into each educational level. But there are other times when access remains an important concept. A child who completes three years of a local school, for example, may not be able to continue to grade 4 if it exists in a far away community. For this reason, access here includes the looser definition of ***an absence of barriers to a child's participation at any grade or level.***

Relevant measures

In its narrowest meaning, retention is measured by enrollment at different grade or program levels. Improvements and deterioration in the rates of retention are assessed over time by examining the relative rises and declines in the measures of a target group at different levels of an education system or, alternatively, through comparisons with the measures of a normative or optimum population. A comparative

approach might determine, for example, whether girls continue their schooling at the same rate as boys or to the same educational level as boys. Boys are often used as a standard because they are assumed to reflect an optimum state in a given context.

As noted above, the larger aim of retaining girls in school implies broader expectations about results than simply that girls have completed specified stages. One such expectation is that girls will have the same opportunity as boys to acquire basic learning skills. Research has shown that girls often experience a different teaching-learning environment than boys in the same classrooms. To determine whether they have acquired the expected skills, the most easily available (but often deficient in other ways) proxy measure of learning is achievement data, e.g., test scores, pass rates, or promotional statistics. A second expectation of retaining girls is that they, like boys, would be eligible for and have access to higher levels of education. These outcomes can be tested through transition rates from the completed level to a higher level of education and by enrollment rates at the higher level.

Other education measures with direct or indirect implications for girls' retention are data on age-related enrollment, attendance, grade repetition, drop out, and promotional standards. Where any of these measures show a consistent difference by gender, there is potential for important learning and ultimately completion problems. Age-related enrollment for example gives an indication of the efficiency with which the system accommodates students. The presence of over-age children in a class reflects late entries, catch-up enrollment policies, or high repetition rates. Variety in the ages of children within grades creates disparities in learning abilities which may impact on the teaching/learning environment. Girls who start at an older age may also have fewer years of enrollment if their dropout is related to puberty. Older children, on the other hand, may be able to learn more quickly if flexible programming is provided. Under-age children by contrast may become discouraged and drop out, or may not attend regularly and end up repeating early grades (where promotion depends more heavily on evidence of basic skill acquisition). Poor attendance may lead to poor achievement, which in turn may lead to grade repetition and eventually dropout.

Audiences and approach

This paper is aimed at practitioners in three capacities: project designers, ministry officials seeking ways to increase girls' participation, and implementers of field initiatives from different sectors interested in a review of international experience with the same issues they face.

For these audiences, the monograph focuses on practical approaches and field-based realities in local contexts. Even when influences originate

at the national level, parents and children only feel them as they are translated into local contexts. The next chapter reviews these influences on girls' participation. By using this first step of identifying critical constraints it may be possible to direct resources narrowly toward specified reforms. This approach helps avoid the common assumption that if reforms are enacted at the national level, their intended effects will be felt in local communities. Chapter 3 then provides examples of initiatives taken around the world to eliminate the obstacles to girls' education. It is through these examples that national level interventions will be examined more closely in subsequent chapters.

Key conclusions

- The rationale for focusing on girls in the context of basic education reform continues to be the simple one: the higher development returns to national investment that accompany the education of girls.
- Not so encouraging is the fact that the private returns of educating girls lag behind social returns so that parents and their daughters are less apt to perceive the personal benefits of schooling. Were these private returns to increase and become more obvious, they might be willing to invest more time and resources in schooling.
- There is a basic minimum of schooling necessary for improvements in some indicators (such as lowered fertility) are to be realized.
- Strangely, improvements in social indicators occur even when education programs are weak and information on topics seemingly necessary to those improvements is absent from the content of education programs.
- The logic of investment returns suggests that the aim of girls' participation needs to expand from enrolling girls to retaining them as long as possible and providing them better and more relevant programs.
- Generalized female disadvantage in education tends to be confined to certain regions of the world, mainly western and central Africa and south Asia. Add levels of wealth to the equation and the female disadvantage intensifies and broadens to other countries.
- With well-defined objectives coupled with past project experience and an experimental approach, we can now address issues of girls' completion with some hope of success.

2. Influencing girls' participation

Introduction

Carolyn Watson, AED

This chapter reviews the major influences on girls' participation in primary education. Most are well known to those who have spent time in the field or who are familiar with the literature on girls' education. Rather than present new insights, the aim here is to compile in one document important research findings and conventional wisdom on this topic. There are several reasons for taking this comprehensive approach rather than a narrower one identifying only "proven" findings. Most important is the difficulty of proving any but the most self-evident influences, such as economic level, ethnic group, or urban/rural location (all background characteristics that in themselves are not easily amenable to change). Most data on causes of non-participation are notoriously soft and unreliable, and only generalizable from one context to another with a great deal of caution. Even the most negative and provable effects such as extreme poverty may deter some parents from sending their daughters to school while not discouraging others.[1]

One can also question whether parents deliberately make decisions about schooling based on analysis of costs and benefits. Where norms of participation are established, girls are likely to be enrolled automatically, while in the absence of strong norms they may stay home without much parental forethought. When Egyptians[2] were asked to explain the reasons children stayed home or dropped out, many answered vaguely "parental neglect" or "ignorance" to explain what they viewed as a general lack of motivation and interest in education. Contrary to what one might think from reading the literature, it is unlikely that parents spend much time consciously weighing the relative costs and benefits of schooling, even though these factors may ultimately affect their decisions about schooling, and therefore need to be considered in our analysis.

Expressed attitudes are also highly unstable and often unreliable. As example, Egyptian parents who claimed strong resistance to girls' education changed their minds almost overnight when schools were conveniently constructed nearby. Later they blamed school factors while school staff blamed home factors as the major reason for some of the children dropping out. Parents also commonly report "politically correct" answers to interviewers who come knocking at their door. In Egypt most parents know from media sources that children should go to school. Many also know that while "tradition" is not a good reason for keeping girls at home in the modern world, "poverty" is an

[1] I have relied heavily on 30 years of living and working in countries of the Middle East, Pakistan, Afghanistan, India, Nepal, Malawi, and Mali for this chapter. Overall the paper tends to stress the areas where I have firsthand experience.

[2] Unless otherwise indicated, the source for the information referred to as "the Egypt study" comes from "The Study of USAID Contributions to Basic Education in Egypt," 1986. The study was conducted twice yearly over five years in a sample of villages in Upper and Lower Egypt that were recipients of USAID assistance for school construction and the introduction of practical education. Data were collected from home and school interviews, classroom observations, and tests of practical skills. Home interviews usually occurred before, during, and after construction to see the effects on attitude change.

acceptable answer—one that is not the parents' "fault." All these examples suggest that *the links between expressed attitude and actual behavior are tenuous at best* and that researchers need to be cautious in drawing conclusions from interview data.

Another reason for reporting as much information here as possible is to provide a resource for practitioners investigating influences on girls' education in their own contexts. Such factors as "physical accessibility of opportunities" can be identified quickly and eliminated if it does not pose a problem. Others may take more time. The framework below makes this process easier by organizing influences into categories. A practitioner can develop hypotheses about potentially significant constraints, verify them, develop and test initiatives to correct them, and monitor results to determine whether the barriers have indeed been removed. This process requires standards of reliability in the local context but does not require that a link be reliably established between influence and effect in the existing literature.

In short, most of the data conventionally identified as constraints on girls' participation are soft even when backed by rigorous data collections. Although not "provable" nor reliably generalizable, they nonetheless suggest where to look in planning initiatives for increasing the participation of girls.

Understanding influences on girls' participation

A framework

This section proposes a framework to simplify the large amount of information on girls' participation. It is based on the assumption that three major conditions should exist to increase the likelihood of girls' enrolling and staying in school:

- schooling opportunities exist and are accessible;
- parents have a positive attitude toward girls' education and are willing to sustain the costs; and
- girls themselves want to complete primary school and are capable of doing so.

Though separated analytically all three categories are interrelated and all affect whether and how long girls participate in schooling. Accessibility of opportunities, for example, both influences and is influenced by parents' and children's attitudes about schooling. The advantage of this framework in a specific context is that once a major condition is satisfied, it may be eliminated—along with its many subfactors—as issues requiring attention. If it is established that accessible schooling

[3] The reader will note in Chapters 2 and 3 an emphasis on examples from the Middle East, north Africa, south Asia, and sub-Saharan Africa. As noted in Chapter 1, these regions are where the gender gap has been most pronounced. They are also areas where the documentation is weaker and less complete. It thus makes sense to try to fill this void.

opportunities exist, for example, practitioners should move on to study whether factors such as parental attitudes are more important constraints on participation.

Another assumption of the framework is that constraints on girls' participation are best understood by looking at how they converge at the grassroots level. This approach in no way disparages the importance of such national-level influences as political will, budget levels, national policies, and the efficiency of management, information, and administrative systems. As far as girls' participation is concerned, these elements are important mainly in the way they affect the local level—as inputs affecting the conditions for participation rather than as goals in themselves (although when considering other education issues it may be better to look at them differently). National level influences appear in the chapter that reviews initiatives to address identified constraints.

Factors that encourage girls' participation in some countries

- Safe schools situated nearby within the community
- Low or no-cost schooling
- Female or trusted male teachers
- Single-sex schooling after grade 3
- Convenient scheduling
- Primary and secondary schools in the same community
- Middle to higher socioeconomic level, urban residence Educated parents, especially mothers
- Encouraging gender role definitions, late marriage, female role models
- Gender-sensitive instruction and school settings

Finally, although enrollment and retention have many issues in common, they also have differences that distinguish them. Too often project designs treat them as though they were subject to the same constraints and amenable to the same interventions. This may not be a productive way of looking at them.

Influences

Accessibility of opportunities

In developing countries with the lowest educational participation and the largest gender gaps, the problem of non-participation is frequently accompanied by inadequate educational opportunities. Studies in Pakistan, for example, showed that what was thought to be a lack of parental interest in education for girls in conservative Balochistan and Northwest Frontier Province (NWFP) was rather a lack of accessible opportunities (Human Resource Surveys for Balochistan (1994) and NWFP 1991). Another study in the same country concluded that the main difference in cognitive achievement between young male and female adults could be explained by the lack of schooling opportunities for females (Alderman et al. 1991). In other countries, such as Mali, few schooling opportunities have existed in rural areas until quite recently, making the reason for non-participation all too apparent.

Because it is such a critical prerequisite, the accessibility of opportunities needs to be eliminated first as a constraint before addressing other problems of girls' participation.

Whether schooling is accessible depends on more than just whether buildings exist nearby. Parents filter their views of accessibility through a complicated set of perceptions and circumstances. These include at least three considerations: whether opportunities are seen as physically accessible, whether parents are comfortable having their children access them, and whether "institutional" barriers exist that prevent children from accessing them. Even when circumstances appear the same to an outsider, the outcomes in terms of participation may be quite different because of the differing perceptions of those concerned. There is no guarantee that a supply of nearby schools will inevitably lead to universal education, although it most certainly will lead to higher enrollment rates.

Physical accessibility

The expectation of educators has been that a nearby school will increase enrollment, especially of girls. However studies suggest a more complex reality. Filmer (1999) finds that indeed in six African countries (most significantly Benin, Côte d'Ivoire, and Mali) out of the Demographic and Health Surveys (DHS) data he analyzes, the presence of a primary school does have a significant effect on the enrollment of 6- to 14-year-old children and may even have a larger effect than the relative economic levels of the children's families (the wealth factor is normally greater than other variables). In most countries where there is an effect, however, there is no difference for girls or boys (28).

Deolalikar, working in Africa, found that an increase in facilities positively affected the enrollment of the poor but had no effect on the wealthy, possibly because the poor are more likely to live in areas where fewer schooling opportunities are available. A related finding in his study was that a decrease in pupil-teacher ratios had a positive effect on the wealthy and a negative effect on the poor, possibly because increasing teacher costs meant fewer resources available to provide places or incentives for schooling (in Ridker 1997: 7, 8).

Parents find it difficult to send small children to a distant school. What may be accessible to older children may not be so for younger children who cannot walk as far, be counted on to stay out of danger, or find their own way. For example, the Egypt study found that girls' enrollments in primary school dropped off rapidly when the school was more than 1.5 km away. If children were already attending a distant school, and a new school was constructed nearby, parents tended to keep boys in the distant school and bring girls back to the

closer school. In other words, parents stressed what they saw as "program quality"[4] for boys and "protection" for girls. In Mali, 5 km appears to be the outside limit for daily commuting, after which parents who can afford to do so board children near the school. In Malawi, children in one sample walked an average of 2.5 km to school and in some cases even 9 or 10 km. In Pakistan, enrollment dropped off for girls who lived more than 1 km from Mosque Schools (Anderson and Chaudhry 1989). The variation probably signals important cultural norms about "safety" and "protection" for children.

Streams, highways, railways, and other obstacles make otherwise nearby schools difficult for some children to get to. Even if children enroll initially, difficult access may affect attendance, dropout, and completion. Few public school systems in the developing world have their own transportation systems and public transport is usually not a convenient or affordable option on a regular basis.

Some of these distance and danger concerns are revisited when a child is ready for a higher stage of education located in a building that is separate or at a distance from the earlier stage. Lavy (1997) shows that the presence of a nearby secondary school can have a positive effect on primary school enrollments. The proximity of the two schools in an area may also signal long, well-established schooling or possibly urbanized environments. Filmer (1999) found that having a primary and secondary school in the same community affected enrollment in only four of 38 countries in his sample, Benin, Burkina Faso, India, and Zimbabwe (2, 28). Although girls at this age may be able to walk farther, they have reached puberty when parents view them as sexually vulnerable.

Psychological accessibility

Parents may perceive physical and moral dangers in schooling children. They may believe the road to school is fraught with potential dangers if children must move through isolated or overgrown areas or enter into the territory of rivals. In Upper Egypt and in Yemen, children remain at home when their families engage in revenge feuds with other families. In Pakistan, children sometimes do not enroll in nearby village schools located in the territory of another family, even when relations with that family are cordial. Parents may require greater protection for daughters by insisting they be accompanied by friends or male members of the household. If appropriate protection is unavailable, they may refuse to send them, abruptly stop sending them, or delay enrollment until they are capable of walking longer distances or protecting themselves better. In all of these cases, the result is fewer years of schooling.

[4] Parents explained that a new school program might suffer from initial disorganization and novice teachers.

Parents may not allow their daughters to attend coed classes, or may remove them from such classes once they reach puberty and feel the dangers are too great. They may not allow girls to attend schools where the teachers are male, non-local, or unrelated, or when the teachers are female if they are seen as negative role models because of their dress or behavior. Although many parents feel more comfortable sending girls to school if there are female teachers, at present only 33 percent of teachers at the primary level are women in developing countries. These ratios are significantly lower in some parts of Africa, Nepal, and Pakistan, and the gaps are usually more critical in rural areas where the positive effects of female teachers would be felt more strongly (Miske and Prouty 1997). The low percentage of female teachers is related to the low enrollment of girls and the subsequent lack of qualified female teaching candidates in areas where they are most needed (Tietjen 1991).

Several studies have shown that the standards of school buildings and equipment have little effect on girls' enrollment. The poorer facilities in the mosque schools, for example, did not have a differential effect on girls' and boys' participation even when a better government school was nearby (Anderson and Chaudhry 1989). Mosque schools, however, almost always have water and sanitary facilities, a factor that has often been associated with girls' participation.

Institutional accessibility

Even when schools are located nearby, they may not be able to accommodate all children who want to enroll. Departments of education limit enrollment by several means:

- defining minimum and maximum ages for entry into each stage of education
- requiring birth certificates as proof of age
- limiting the number of shifts that can be held in a school building
- scheduling classes at a time of day when some children cannot attend
- setting strict class sizes or fixed student/teacher ratios
- setting promotional quotas for who can move on to the next level of schooling.

Alternatively, they can insist that all children be accommodated in whatever way is necessary, through larger classes, more shifts, or by using temporary class spaces, e.g., on outside verandas or under trees.

Local school authorities who feel they are not given sufficient resources, space, or teachers, may also set their own informal limits. They may

require unofficial fees (for extra activities, repairs, supplies, school events and hospitality, scouts, special tutoring, etc.) that are enough to prevent poorer children from attending or force parents to choose which of their children to educate. Fees may be graduated so that they become less affordable as grade level increases (as in Egypt for special tutoring). They may set entry criteria such as skill capability (as is common in Pakistan for grade 1 classes), limit the number of students in a given year who enroll, and discourage those who must wait another year or two as they and their parents become accustomed to other uses for their time.

Teachers may discourage students who have disciplinary or academic problems from continuing. Community members may react to scarcity by deciding informally to allocate places to certain groups of children and refrain from enrolling others. When permitted to build additional classrooms, parents who contribute funds determine who will attend. In circumstances like these, where limited resources and places make choices necessary, it is girls more often than boys, and the powerless more often than the powerful, who are denied the opportunity to learn.

Parental attitudes about girls' schooling and their willingness to sustain the costs

While parents are the usual arbiters of whether children go to or stay in school, especially in the earliest grades, they can also be strongly influenced by what their children want. Thus, one should be cautious about attributing too much foresight or planning to parental decisions about schooling. For example, one Egyptian study showed that a significant number of rural parents simply did not care whether their children enrolled, especially when they were girls. Most who sent their children—according to teachers—also did not know what was required to do well in school, such as maintaining regular attendance and having quiet time to complete homework. Consequently, many of the early generations of rural children failed, repeated, and eventually dropped out of school.

Factors affecting parental attitudes about girls' schooling fall under three main headings: parents' background characteristics, the costs and benefits they see in education, and the general norms and practices of the community that affect parents' attitudes about schooling. Parents' attitudes are, of course, also affected strongly by the convenience and accessibility of schooling opportunities.

Parental characteristics

Certain background characteristics of parents have been shown in a number of studies to be correlated with educational participation.

The three most important are economic level, parental education, and residence in an urban or rural location.

■ *Economic level*

One of the most important predictors of education participation—both enrollment and completion—is the relative economic level of the households from which children come. Filmer (1999) demonstrates that while generalized female disadvantage is confined to certain regions of the world (Western and Central Africa, North Africa, and South Asia), wealth gaps are large in almost all countries where DHS data have been collected. Sometimes in countries where gender gaps are small there are still significant wealth inequities in education. Filmer consequently stresses the importance of looking at both gender and wealth simultaneously when addressing inequities of education (1999: 2, 30).

Egypt's centralized education leads to little variation in school quality. The socioeconomic background of the child has a greater effect on skill levels than school variables because the latter are so uniformly poor in quality.

Some examples of attainment show this wealth phenomenon. In Mali, for example, only 12 percent of the poor complete grade 1, while 60 percent of the wealthy do so. The gap in median grade completed between wealthy and poor is four grades in Mali, three grades in Egypt, and 10 grades in India. Almost all children from wealthy households in Pakistan complete grade 1 and most complete the primary stage, while much lower levels among poorer families do so (World Bank using DHS data). The authors of a World Bank document conclude that the "shortfalls from universal primary completion are, for the most part, due to children from the poorest households (and in some cases middle income households) not completing target levels of schooling" (www.worldbank.org). Focusing on the poor would do much to advance the aims of universal primary education.

When gender is added to wealth in Filmer's (1999) analysis, the gaps became even more significant. In attainment, for example, countries fall into two categories: one with "generalized" female disadvantage and the other with a female disadvantage confined mainly to the poor (1999: 19). In countries such as Niger, Egypt, Morocco,[5] India, and Pakistan with already large gender gaps in enrollment, wealth deepens the female disadvantage. In India 81 percent of males aged 15–19 and about half of females complete grade 1, and the gap is still significant at grade 5, with 73 percent of males compared to 51 percent of females completing. When

[5] Morocco has the largest wealth gap of 63 percentage points.

wealthy males and poor females are compared, the gap widens to 96 percent for the wealthy males and 29 percent for poor females completing the primary level (World Bank web site). Looked at another way, the gender gap among the wealthy in India favors males by 2.5 percentage points, while among the poor the difference is 34 percentage points (Filmer 1999: 4). These examples suggest that in some countries, girls' low completion rates might be most productively addressed by narrowing the focus to girls or rural girls from poorer families.

In one group of countries, the wealth gap in enrollment is larger between wealthy and poor females than it is between wealthy and poor males. In Pakistan for example the gap is 35 percentage points between the two groups of males and 64 between the two groups of females. In Egypt,[6] the gap is 17 for males and 39 for females, and in India 34 and 55 (Filmer 1999: 16). Filmer notes that even while wealth gaps in general are much larger than gender gaps, investment in girls' education is still important because of the greater private and social returns that accrue to that investment. As he notes, it is the level of girls' education and not the gap that is important. However, he adds that wealth is also an inequality that needs to be addressed when the objective is universal education (Filmer 1999: 14).

A few small subnational studies suggest that other factors may at times counteract the wealth effect on education. Anderson and Chaudhry (1989) found that poverty did not differentially affect the participation of girls and boys in mosque schools in Pakistan, presumably because such factors as proximity, security, and low cost encouraged most nearby children to attend. A study of 617 lower-class urban Egyptians found that overall 66 percent of 6–15 year olds attended school (an overall poverty effect). However only 42 percent of the relatively more affluent children in these communities attended school. An explanation for the lower enrollment of "wealthier" children in this popular quarter was that wealthier parents were able to secure their children's futures—for boys through income-earning activities not dependent on education and for girls through the ability to attract good husbands (Rugh 1981).

A reverse gender gap also appears at the intermediate level of schooling in poorer urban areas of several countries. In Egypt, poor urban boys drop out at or before the end of primary to earn

[6] Interestingly, in Egypt, only one-tenth of adolescents who dropped out mentioned lack of economic means as a main reason. More important was poor scholastic performance. However, the main reason given by those who "never attended school" was the poor economic conditions of their households (Ibrahim et al. 2000).

income or learn skilled trades, while girls remain in school in hopes of qualifying for "respectable" civil service jobs.[7] In Botswana a similar female advantage appears at junior high and high school, probably because boys "incur higher opportunity costs by attending the lower quality schools in view of the income producing alternatives available to them in mining and agriculture" (Adams and Kruppenbach 1986: 7).

■ *Parents' education*

Another important characteristic of parental background is educational status. Most studies dealing with this factor report that it is the education of the mother that is an important predictor of whether a girl goes to or stays in school, but fathers may also have some effect. Miske and Prouty (1997) report that daughters of educated women are as much as 40 percent more likely to enroll in school (2). In Egypt, Fergany (1994) finds that a better educated (more than minimum literacy) mother improves the chances for children's initial entry and attainment of higher cognitive achievement levels but not necessarily of primary completion (in Ridker 1997). In Kenya, mother's education has a greater effect on the enrollment of children from poor as opposed to wealthy households, suggesting that positive effects on children's enrollments might be obtained by promoting literacy classes for females from poor families (Deolalikar in Ridker 1997: 7, 8).[8]

Filmer (1999), using DHS data, showed that both the average level of education attainment and the maximum number of years of schooling completed by household adults aged 20–64 have statistically significant effects on the educational participation of children in almost all the DHS countries studied.[9] The marginal effect of increasing the average years of schooling of female adults in the household by one year, for example, increased the chances of children's enrollment between one and six percentage points. Overall the effect of adult females' education was significantly greater than males' education on children's schooling in 11 countries. The four cases where the effect of males' education was greater were explained as possibly an artifact of the related effect of higher household income. Finally the DHS data confirmed in a subset of eight countries (most of them with large female disadvantage) that the presence of educated adult females in the household had a larger effect on girls' enrollment. This was

[7] These observations are from the author's studies of a low income area of Cairo.

[8] However, there does not yet seem to be definitive evidence on whether females who acquire education as adults have the same effect on their daughters' enrollments as those who acquired their education as children. USAID's Girls' and Women's Education (GWE) activity is investigating these relationships in Bolivia, Nepal, and Honduras.

[9] This was not true in countries where either adults' or girls' attainment was consistently low or high without much variation (Filmer 1999: 25).

consistently true for India, Nepal, and Pakistan. In nine other countries, the education of adult females had a significantly greater effect on boys than girls, which is partly explained by the overall low level of adult female education in these countries (Filmer 1999: 5, 25–26).

■ *Urban-rural residence*

A final strong predictor of overall, and in particular girls', enrollment is the urban or rural residence of their families. Where information is available, all measures of participation and attainment show consistently more positive outcomes in urban areas—these indicators include enrollment, dropout, completion, and often even achievement. Even though the differences between urban and rural outcomes are well known and accepted as fact, it is difficult to estimate them accurately because of the way "urban" and "rural" data are reported. If disaggregated at all, cities and towns and their surrounding rural areas usually constitute one group called "urban" while rural "regions/districts" including small settlements and areas of concentrated population such as district capitals, constitute the contrasting "rural" group.

Pakistan demonstrates how schooling outcomes differ in urban and rural settings. At the start of the Pakistan Primary Education Development (PED) Program in 1989, estimates showed that primary participation rates varied from highs in urban areas (76 percent for males in urban Sind and 68 percent for females in urban Punjab) to lows in rural areas (30 percent for males and 3 percent for females in rural Balochistan). Primary dropout rates similarly showed male dropout highest (77 percent) in rural Sind and female dropout highest (93 percent) in rural Balochistan compared to lows for males (12 percent) and females (24 percent) in urban Punjab (AED 1994: 4–6).

A study by the National Education Assessment Program (NEAP) showed that achievement scores also vary by urban-rural location, albeit with small differences and overall low scores. In grade 5 Urdu, for example, urban girls had a mean of 27 percent and urban boys 25 percent against comparable scores of 26 percent and 23 percent in rural areas. In grade 5 math, the mean scores were 26 percent for urban girls and 30 percent for urban boys compared with 23 percent and 27 percent in rural areas. Scores varied consistently in the same directions in all grades and subjects tested. The significance is in the consistency rather than the size of the effect. BRIDGES studies confirmed that "good" (high achieving) schools were more likely to be in cities and towns than in rural areas and that the gender of the teacher made a significant

difference in the completion levels of rural schools but not urban schools (Warwick and Reimers 1991: 2).

Urban parents are more likely to feel the importance of schooling for both boys and girls. For them the benefits of education are obvious and the constraints fewer: schools are nearby, the household workload is less, community norms favor education, and employment opportunities are more widespread and visible. In Lahore, Pakistan, for example, education is considered so important to urban parents that they make significant sacrifices to ensure their children receive the best quality education possible. Over 90 percent of Lahore's children go to school including 75 percent of the poorest children. And most (74 percent of children from middle income families and half from poor families) go to private schools despite the higher cost and the fact that government schools exist near by (World Bank 1996).

The favorable conditions found in urban areas may be absent in rural environments. In rural areas, child labor is more essential, primary and higher level schooling opportunities may not be accessible or safe, academic programs may be weaker, promotional exams may loom larger, and fewer parents are capable of providing the help with schoolwork that some systems require. In Bangladesh, for example, BRAC found most rural parents were unable to help their children with homework and so reduced the amount of homework required of students. IMPACT in the Philippines found it difficult to rely on parents who were illiterate or too tired by the end of the day to help their children with homework, and sought out high school students to give remedial help to primary students (Rugh and Bossert 1998).

In brief, location of residence and wealth are the strongest predictors of education outcome, with gender often aggravating both of these conditions. Although neither is within the capacity of educators to affect directly, it is possible to create conditions and incentives where disadvantaged children will be more likely to avail themselves of educational opportunities.

The costs and benefits of education

Even though parents' decisions about schooling may be largely based on an unconscious sifting of options, it is nonetheless important to review the various costs and benefits as parents may perceive them.

Those coming from a cultural perspective that stresses the rights and potentials of individuals sometimes find it difficult to understand that many parents in developing countries base their assessments of costs and benefits on what is good for families as a whole, and only secondarily

on what is good for individual children. The focus on family interests may explain why studies in Africa have shown that what was assumed to be community financing of schools turns out in reality to be household financing of education. Parents, not a generalized "community" group, are expected to bear the burden of their children's education. This is important when it comes to expectations about community support, since involving communities in many cases simply intensifies the burden on parents whose capacity to pay may already be strained (Maclure 1997: 8).

> A state institution that previously extended benefits to individuals and their families at minimal direct cost to them, school today is expected to become more of a community institution... but one that paradoxically now proffers fewer benefits and entails more cost to families. (Maclure 1997: 20)

The reasons parents give for their children's non-participation have changed over time and have tended also to differ for girls and boys. A study of rural families in Egypt (CEDPA New Horizons Needs' Assessment 1995) found that an important current reason for non-participation was "poverty" and that this reason was more important for girls than for boys. "Tradition" was not a prominent reason. In previous generations poverty was considered more important for males than for females who were constrained by the equal factor of tradition. At least two intervening events may account for this change. First, parents expressing their opinions in the mid 1990s after years of government pressure to educate children, no longer felt it acceptable to excuse a lack of participation with the answer "tradition." Second, the associated costs of education have become so high that many poor families consider seriously whether and how many of their children to educate. Consequently, poverty had become a justifiable reason for non-participation. When respondents reflect back on the past, tradition seems an acceptable reason for women not to have participated earlier but men need the more compelling reason—poverty—for their lack of participation. This illustrates again the "softness" of data about attitudes.

Reasons for girls' dropout vary considerably, depending on who is asked and what the motivation of the respondent is. A study in Malawi showed that between grades 1 and 2, both male and female students said girls dropped out primarily because of the high school fees, with girls suggesting that another main reason was their "laziness or playfulness," i.e. lack of seriousness. Fathers reported that girls dropped out mainly because families preferred to educate boys and only secondarily because of fees (fathers are responsible for providing fees). Mothers reversed the priority of these two factors, citing fees as more important (blaming fathers' inability to pay). At grade 8 girls and their mothers both reported the main reason for dropout to be pregnancy, while both sons and fathers suggested the reason was early

marriage. In families of actual dropouts, parents said the main reason was an inability to pay fees, while additional reasons included lack of motivation for boys, and early marriage for girls (Davison and Kanyuka 1990). A similar difference of opinion occurred in Egypt when parents and teachers were asked why specific children dropped out of school. Parents blamed the school while teachers blamed the parents.

■ *The costs of schooling*

"Costs of schooling" almost always appear prominently in lists of reasons for non-enrollment or limited participation. The costs that might deter poorer children from attending school are well known, and include such expenses as school fees, clothing (including uniforms and shoes), supplies, textbooks, snack foods, transportation, and in some cases after-school tutoring. A study in Egypt found the cost to parents of schooling a child averaged about LE 250 ($75) per child per year (CEDPA 1995). Multiplied by several children in a family and considered in the light of an annual per capita income of $1,200, the difficulty is obvious. In addition, some of these expenses increase with grade level, causing families with lower incomes to consider seriously whether they can afford to continue sending their children to school, especially if they are not doing well academically or if girls "do not especially need or want education."

Though some costs may seem normal, such as clothing and shoes, they are not always so. A school child may be expected to wear a dress or uniform that exceeds the cost of normal dress in poor families and may have to wear shoes when they might otherwise go barefoot. Parents may give children pocket money or buy them special kinds of food to take to school. Although not always absolutely necessary, these costs may be considered part of the expense of schooling, in order that children "will not be shamed in front of others." Girls' expenses often exceed those of boys if uniforms are required. In Guinea the cost is $2 more for a girl out of a total average of $18 (Miske and Prouty 1997). In some countries like Mali, distance to existing schools may be so great that children must be boarded in the vicinity, or daily transport must be arranged at considerable expense to parents. The costs of village schools in that country are expected to be almost entirely covered by parents as donors reduce their share of the costs in the future (see Tietjen 1999).

When primary and secondary enrollments declined in Tanzania in the 1990s and educators discovered children starting school on average much later (at about age 10), a study was conducted to investigate the effect of costs on school-going. The study found

that the private returns to schooling had declined significantly during this period. Parents also saw dramatic differences between the still-affordable cost of primary and the no-longer-affordable cost of secondary for poor families. The authors concluded that even if more places were provided, without subsidization, the costs of secondary school were high enough to discourage enrollment at both levels, since the returns of primary schooling were not enough without secondary schooling. The late start in the Tanzanian primary school was attributed to opportunity costs which were a more significant problem for girls (Mason and Khandker in Ridker 1997: 6–7).

The opportunity costs to the family of doing without the child's household labor or outside earnings has been identified as a significant factor affecting girls' participation. A study in Egypt showed girls doing 85 percent of the household work assigned to children in rural areas (CEDPA 1995). In Guinea, 95 percent of girls claim they help in household tasks, 55 percent say they do so on a daily basis, and 50 percent say they come to school late because of these chores (Miske and Prouty 1997). In cultures with strong segregation of sex roles, the work tasks of girls and boys are not usually interchangeable, although if crossover is required, it is more likely that girls will do boys' tasks. If one parent dies or is ill, the child of the same sex must leave school and take over the parent's work. Since girls are charged most often with caring for siblings, they may have to leave school when a new child is born or when the work of many young children becomes too burdensome for their mothers. Eldest girls sometimes are withheld or withdrawn from school for these purposes even while their younger sisters go to school. Birth order therefore can be a critical factor when parents only send some of their children to school (although the pattern is not always consistent) (author's experience).

Another long-term cost parents must consider is that educated children often refuse manual or agricultural jobs when they become adults. Rural parents know they are likely to lose their educated children to employment in distant cities and towns. For this reason, many rural parents in Egypt diversify their investment in their children's futures by encouraging good students to continue in school and diverting poorer students into technical or farming activities. In the past it was customary for one girl of the family to remain at home

> "The critical point is that...education offered is of sufficient quality. Even "free" schooling carries substantial costs...so parents' willingness to send children to school depends considerably on their assessment of the quality of education being offered, especially in the case of girls." (World Bank 1996)

(unmarried and uneducated) to take care of her parents, and at least one boy to stay home and look after the land. This meant either sending these children to school for a short time or not at all, while more academically gifted children continued. These customs, to the extent that they are still practiced, make it difficult to enroll all children at the primary level as long as compulsory laws are not enforced or schooling is not attractive enough for children to convince their parents to let them enroll and continue.

■ *Benefits of schooling*

Overall, parents must come to believe that the benefits of education including the quality of the education their children receive outweigh the costs of schooling (see World Bank 1996: Report No. 14960-PAK). To the question what are the benefits of educating your children, the standard answer of rural Egyptian parents (see Annexes) is that boys can obtain jobs and avoid a future in farming, and for girls that education "expands their vision" (enlightens them) and teaches them "to organize their homes and family life better," and on a personal level that it makes them "cleaner and neater." Parents also believe educated girls make better wives and mothers. In both Egypt and Pakistan, parents report that educated people in general are more polite, responsible, and rational in their thinking; consequently, school staff see it as a significant part of their mandate to emphasize proper behavior. The opposite is true in Mali, where parents believe schooling makes children less willing to adhere to the respect behaviors expected in villages (author's experiences in Egypt and Mali).

A factor that in some areas draws educational, economic, and social benefits together is the fact that education is a major marker of class status. In Egypt and India, for example, the easiest way for motivated individuals of the lower classes to make the transition upward is to acquire degrees that lead to higher class occupations. Once they achieve higher status, their children must attain similar educational levels to maintain the family's standing. This is one of the most important operative conditions in countries undergoing rapid expansion of the middle classes and bureaucratic occupations. Noting this phenomenon, education officials and developers once believed it would only require educating one generation of children to solve the problem of participation. Now, however, other factors—the cost of education, inflation and subsequent lowering of the social value of degrees, the poor quality of education programs, a labor market that no longer rewards education, etc.—have undermined that expectation. Among some lower-middle-class urban families in Egypt, for example, where a decade ago parents would have sacrificed much to educate their children, the rates of

participation are declining because of the high costs and limited personal returns associated with education.

The length of children's schooling is related to parents' expectations about the benefits of each stage. Most parents recognize two qualitatively different levels of effort and benefit in formal education. The first—primary or basic education—confers basic literacy and numeracy skills. The second requires longer immersion with concomitantly greater expenditure of resources and effort. The benefit of completing this second level is that an individual qualifies for professional occupations with their accompanying stable incomes and preferred status—possibly a job in the government bureaucracy. While most parents may be willing to send children to school long enough to obtain functional literacy, they may hesitate to support the second level of effort, which requires that a child succeed at intermediate, secondary, and even possibly higher education levels before obtaining significant additional benefits.

A parent may withdraw a child from primary school when functional skills seem well-enough developed if there is little expectation that the child will continue to higher stages. Encouraging a child to complete primary school may indicate commitment to completing higher levels of education and the added efforts and expense (tutoring, fees, etc.) of passing national promotional exams. A parent may also withdraw a child before the end of the primary level because "education didn't take"—that is, no apparent learning went on—either because the program was poor or the child lacked the capability to succeed in the system.

There are few private advantages in completing any of the intermediate stages after primary unless children expect to continue to the final level that ensures a job. In the first years of schooling, parents may sanguinely report that they want their children to continue to the highest level possible, but by the final years of primary they often have more realistic expectations.[10] High repetition rates in major exam years are usually a result of children who continue to hope they can make it to the next level.[11]

Community norms and practices

Parents are susceptible to the norms and expectations of their communities. This section looks at three subcategories of community factors

[10] In the CEDPA Needs Assessment 1995, a number of girls given a basic literacy test had difficulty reading simple words and sentences even though most of them had completed several years of schooling. Their parents had removed them from school when it was clear that the program had had little effect.

[11] Egypt had high repetition rates in the last year of primary until promotional exams were discontinued in an effort to encourage children to continue on to intermediate school.

that affect parents' attitudes about girls' participation: the historical context, gender role expectations, and local labor force realities.

■ *The historical context*

Time lags. Families in several villages in Egypt were asked to recall the educational experiences of members as far back as they could remember. When plotted on a timeline, their answers showed that first, a small group of boys enrolled and persisted, urged on by interested parents and community leaders, and by example became role models for other village boys. This was followed by a second period when a larger group of boys enrolled but many dropped out, and finally a period when a large group of boys enrolled and persisted as education became a village norm. The periods were similar for girls, but with a time lag until a critical mass of boys was enrolled. The enrollment and persistence stages for both boys and girls could be extended or compressed depending upon such local factors as a newly accessible school in the village, the encouragement of a village leader, or the advent of a popular teacher.[12]

An implication that could be drawn from this study is that gender gaps in enrollment and retention are only a reflection of time lag and that with patience the gap will narrow. However, in these villages other variables such as location near major urban settlements or industrial sites, farsighted community leaders, and the early establishment of schools also played a role in shortening the time lag for girls.

Community leaders. Community leaders played an important role in children's participation in the Egypt study. Wherever a greater than usual enrollment existed in the early 1980s, leaders could usually be found who had supported education by soliciting resources from the official establishment and encouraging parents to send their children to school. When community members become involved in the establishment of local schools, they usually shape conditions in ways that overcome parental resistance, such as ensuring flexible schedules, overcoming financial hurdles and monitoring the presence of needed materials and staff. A study of community participation shows that indeed involving communities in education delivery tends to have a greater effect on educational participation than any of the other anticipated community participation outcomes of lowered costs, achievement, quality, etc. (Rugh and Bossert 1998).

[12] Interestingly, decreases in participation also occurred for both males and females at times of major national crises, even when the crises did not especially affect conditions in the communities concerned.

The reverse can also prove true—when community members and their leaders feel alienated by schools, program content, and outsider staff (as has often been the case in rural Morocco), they are less likely to enroll their children. The NGO fieldworkers implementing the Community Support Project (CSP) in Balochistan, Pakistan, had to overcome strong parental distrust of government before they were able to win their cooperation. Community leaders, depending on their attitudes, can become effective catalysts or major obstacles to educational participation.

Religious leaders. The record of religious leaders—national and local—has been mixed with regard to promoting modern primary education. The example of Egypt is again instructive. Long before modern education came to Egypt, Koranic schools existed in most villages. There children (often boys and girls together) memorized the Koran and learned to read and write classical Arabic. Today these small mosque-associated schools survive in many villages, and are frequented by school children after regular public school hours. Meanwhile an entire religious school system has been established in Egypt from first grade through university in competition with the "modern" school system. In the last few decades, it has been the fastest growing school system in Egypt, although it only enrolls about 8 percent of those in the public system. Personnel from this system are unlikely to support modern primary education—indeed they compete with the secular system for the recruitment of students.

Other religious personnel (imams or shaikhs) in Egyptian villages also do not normally become involved in issues of public education, and if called upon to do so, cannot be relied upon to promote girls' participation. Many have themselves been educated in the religious system and consequently may not be positively inclined toward "secular" education. Involving them in campaigns to enroll or keep children in the public system may unnecessarily complicate the issue of participation in some countries, and give them an importance in the matter they would not otherwise possess. In Pakistan, a study of mosque schools (where a regular teacher is attached) found that 18 percent of imams were against girls' education, 13 percent favored their education up to age 8 or grade 5, and 60 percent unconditionally supported girls' attendance in mosque schools (Anderson and Chaudhry 1989: 24).[13]

Islam as a source of values about educational participation. Islam has often been blamed for the poor turnout of girls in countries where

[13] It should be noted that imams are given a stipend to allow the classes to be conducted in their mosques.

it is the dominant religion. There are, however, no direct strictures in the Koran or Sunna opposing education. The reverse in fact is true—there is clear encouragement to educate both boys and girls. Individuals and special groups, however, often use religion to reinforce their personal views and practices, knowing they will not be criticized if invoking religious rationales. The Koranic injunction for women to be modest, for example, could be interpreted by a person opposing girls' education to mean she should not go out in public and therefore should not go to school. On the other hand, those who support girls' education can cite other Koranic verses saying that both girls and boys should be educated, "even if they must go to China" to do so. It is usually futile for non-Muslims to enter into this debate, or for Muslims of differing persuasions to convince one another of which interpretation is "correct."

Evidence that Islam itself is not necessarily an obstacle to girls' education can be found in the enrollment figures of culturally conservative countries of the Arabian Peninsula (Saudi Arabia, Kuwait, the United Arab Emirates, Bahrain, etc). These countries have a large reverse gap favoring girls over boys in higher education, and little if any gender gap at the primary and secondary levels. Also a number of "fundamentalist" groups in Egypt have demonstrated their support for education by opening tutoring centers to help children of both sexes with exams and homework and by providing financial help for poor children who cannot afford school fees.

Christianity as source of values on education. Christians in Middle Eastern countries have generally been early adopters of education. In Lebanon where overall there now is a reverse gender gap, Christians have had the longest involvement with education. Egyptian Christians were also early adopters of education and before independence constituted a disproportionate ratio of the educated middle and upper classes. A study of lower-class urban Christians in the early 1980s, however, showed that poorer Christians lagged behind their Muslim neighbors in educational participation, especially of girls (Rugh in Fernea 1985). The states in India with the highest female literacy rates (such as Kerala) owe these successes to early missionary schools, that even today provide a better quality academic program than most schools in the public system.

Reports suggest that Latin American religious leaders also have a mixed record with regard to education. On one level, branches of the Catholic Church have been active in supporting alternative private or semi-governmental programs for children who might

otherwise be denied opportunities to learn, e.g., *Fe y Alegría*. Their encouragement has lent an air of moral reinforcement to participation as well as to parents' sense of security about their children's safety in school. On the other hand, village priests have not always had a benign or positive influence on educational participation and in many villages may not be reliable advocates for girls' education. In general, while Muslim and Christian religious leaders may in certain cases be mobilized to act as advocates of girls' education, it would be a mistake to assume in all cases that religious clerics possess either the moral authority or the motivation to prove effective in this job.

The "respect" factor. A widespread belief in traditional societies that educated people should be accorded special respect does much to encourage children and their parents to make the supreme effort to become educated. Sweetser (1999) notes that in Bangladesh, "education of a family member raises the status of the entire family." When children were enrolled in BRAC schools, she says, their parents were elated by the respect they felt their families had gained in the local community (11). These expectations are especially important in family-based societies that see enhancement of individual family members as a reflection on the group as a whole.

Teachers are revered in many parts of the developing world, serving as role models for rural children. In some countries they wear special clothing in order to be recognized and treated with special deference (as previously was the case in Swat, Pakistan). In Egypt, a change in dress style automatically accompanies the transition from lower class to middle class to indicate that a person is educated (Rugh 1986). A well-dressed, respectable-looking woman walking alone will be called "doctor" to give her the presumption of responsible behavior that comes with education. In Nepal, participants in literacy classes begin to see themselves as "educated" (sometimes even when they remain only barely literate) and begin to adopt more responsible health and other behaviors. When women who may previously have been denied membership on community councils become educated, they are suddenly given places on the councils and their advice is sought, e.g., India. All these behaviors create a set of assumptions in communities about the respectability and desirability of education for women. They may be sufficient to counteract the negative constraints of poverty and tradition for girls. Yet there is little mention of them in the literature.

■ *Gender role expectations*

"Gender" is not a well-understood concept in many countries. The idea that sex roles are socially defined—not predestined—and vary

from place to place may be quite alien. As with any cultural belief, beliefs about social roles are assimilated from childhood, and it is very difficult to redefine gender roles in such contexts. A community's notion of gender definition is crucial to understanding how education can benefit girls locally. Since gender roles often make functional sense in the way family life is organized, it is also not enough to say they should change without understanding the part they play in social life. Community resistance can sometimes be overcome by casting the benefits of education in terms of education's contributions to the well-being of all family members rather than only to the well-being of the girls. One of the significant constraints recognized in the literature has been the lower private returns on investment in girls' education. Girls and their parents in many cases do not see their opportunities measurably expanded by education. Arguments citing the important social returns to the country in improved development indicators are not convincing to family members who may care more about immediate as opposed to hypothetical future benefits.

Marriage. Parents are especially affected by local views of how education affects the marriage chances of girls. In many countries (India, Pakistan, Egypt, etc.) men are expected to be more educated than their wives, which causes some women to perceive each level of educational attainment as narrowing the pool of men they might marry. At some level of education they know they have essentially given up the chance to marry. On the other hand, educated men in some conservative Arab societies have gone from wanting "more malleable" uneducated wives to insisting upon "more companionable" educated wives. The rush to educate girls in these countries and the consequent female advantage in higher education is threatening to make prolonged education there "a woman's activity." In India an educated women capable of working may receive marriage proposals without bringing the dowry that usually accompanies the woman in marriage.[14] In Guinea the main reason for dropout is marriage, and the second most common reason is household responsibilities. People in that country are reported to have seen more instances of girls who have been "corrupted" by schooling than who have improved their chances for a career. Schooling, consequently, is seen as giving girls a freedom that makes them less desirable marriage choices (Miske and Prouty 1996: 16).

Hamamsy 1994 notes that education helps demarcate acceptable behaviors for Egyptian girls: an educated girl can marry late without

[14] See Sweetser (1999), who says the first benefit of schooling girls reported by BRAC parents is that she will be able to better manage her household, and she will find a husband more easily even with lower dowry.

disapproval, while an uneducated girl is pressured to marry young. This pattern suggests the need to look carefully at marriage and its effects on girls' education, but also to consider it a volatile and as yet unstable variable likely to change quickly if the benefits of education become clearer. In any case, parents will be affected by prevailing community views of marriage when considering the length of their daughters' education.

■ *Labor market realities*

The strong association between education and employment has made it difficult for rural parents to see why girls would benefit from schooling beyond the primary level. Increasingly, however, many governments have expanded services in rural areas and have employed educated women. Seeing this, parents begin to view education as a way of ensuring that their daughters will be able to support themselves if necessary as adults.[15] Among the urban poor in Egypt, as noted, prolonged education has come to be seen as a way for women to gain access to respectable (as opposed to manual labor) jobs. Although women in the Middle East, North Africa, and Pakistan are not expected to provide the main support for families, increasingly urban and even rural men want to marry educated working women who can contribute at least to a portion of family income.

The community's views on whether women should be employed are a major factor in girls' long term educational participation. Another is the realities of the labor market and the extent to which girls can translate their credentials into opportunities for work. The growth of the civil service has been a boon to women by providing them accessible employment opportunities based on educational level and often by limiting the number of hours that they have to remain away from their household responsibilities. These jobs, however, usually remain poorly paid and are only affordable to families with other sources of income.

An effective encouragement for educational participation has been the example of community members who acquire higher degrees and demonstrate personally the advantages of acquiring stable, "professional" jobs. Another informal but useful advantage—as good as money in some economies for women who do not work—is the ability to exploit informal bartering arrangements such as conducting religious ceremonies and reading religious materials, reading prescriptions and writing letters, and helping the illiterate

[15] In many countries divorced or widowed women return to their own families for support. So although it has often been said that parents are reluctant to educate girls who go to "another man's family" upon marriage, it is also true that many parents see education as insurance against disruptions in their daughters' marriages and a possible need to support them and their children later on.

understand contracts. In agricultural communities, "desk" jobs are coveted because employees do not have to dirty their hands or depend upon the vagaries of weather and price controls for their income. In the Egypt study, the local role models admired most by the community were rural residents in such "modern" jobs as agricultural extension workers, irrigation engineers, teachers, social welfare personnel, and other government bureaucrats.

Without compelling reasons, community norms prove highly resistant to change, especially if modifying them has a direct effect on family life, as changes in gender roles are apt to do. One sociologist was surprised to find how resistant Asian family values had proven in the face of the homogenizing effects of globalization. He found that while family values resisted new kinds of development at first, once they had started and their advantages were apparent, the same family values were extremely helpful in spreading new practices rapidly. He cautioned, however, that this effect was not evident in Africa and India and that it is thus important to know how values are constructed in each place to understand their different effects (Glazer 1999: 34). Change may be easier to effect when it is rationalized for a time in terms of familiar values. "Schooling is good for girls because it makes them better wives and mothers" may be a more compelling rationale for a community in transition than "schooling helps a girl find employment."

One complaint from parents has been that primary education curricula are not relevant to rural contexts—that they reflect urban middle class values and needs. The few studies where this issue has been raised suggest that it is more complicated than it appears. Rural Egyptian parents, for example, complained when practical skills—agriculture, electricity, carpentry, fisheries, and home economics—were introduced, because they felt these courses took time from the academic work needed to succeed in exams. If practical skills were to be taught, parents said, they wanted their children to learn accounting, typing, and other clerical skills to prepare them for "urban" types of work. When asked, parents were not willing to venture opinions on the content of the academic program, saying "educators know best" what is necessary to obtain diplomas.

When rural Malian parents claimed their children needed more relevant education, their first priority was income-earning skills—carpentry, welding, machine work, etc. for boys, and sewing and craftwork for girls—additions to the program that were too difficult and costly for this resource-poor nation to provide.[16]

[16] Personal interviews, June 1999.

In all these examples employment occupies a central place in parents' minds when considering the benefits of education. In many contexts that means that boys are automatically considered to need the skills of education more than girls do.

Girls' attitudes about schooling

Two common reasons expressed by Egyptian parents for withdrawing girls from school were that schooling "didn't work" and that the "children didn't want to go any more," both related to how girls feel about schooling. A study in three low-literacy governorates of Egypt found that more than a third of the children dropped out for reasons of failure and poor achievement, and another third because they disliked school or said they were mistreated by the teacher (Fergany et al. 1994).

A very recent study of adolescents in Egypt reported the main reason for dropout for both sexes in all the regions studied regardless of socio-economic level was poor scholastic performance. The second reason was "low value or interest in education" by the adolescents and their parents (Ibrahim et al. 2000). When parents are ambivalent about girls' education, it may be girls' attitudes that tip the balance in favor of or against schooling.

The reasons girls may feel they want to continue or drop out of school fall into three categories: the schooling environment, the academic program and their performance, and their own personal problems with schooling.

The schooling environment

There are a number of physical and psychological elements in the schooling environment that discourage the participation of children. Classrooms may be too cold in winter, too hot in summer, leaky when it rains, and poorly ventilated and lighted. Many do not have electricity. There may be no furniture, and children may sit on cold damp floors so closely crowded together that even the smallest movement is difficult. They may not be able to see the blackboard or the teacher, and the teacher may ignore them when calling on students to practice new skills. From where they are sitting, they may be unable to reach an aisle to perform in front of the class, or they may be stepped on as others move to the aisle.

In certain seasons, the schoolyard may become a sea of mud or snow. Children may have difficulty leaving the classroom to go to the bathroom or, if they go, may find unsanitary conditions with little or no water[17] and a lack of privacy. Many schools designate places where

[17] The adolescent study in Egypt found that 40 percent of respondents reported unclean toilets. Better school facilities exist in rural than urban schools (Ibrahim et al. 2000).

girls or boys may perform these functions—for boys perhaps outside the schoolgrounds in ditches or behind nearby bushes; for girls in a space between a school yard wall and the school building itself. The smell from this area may pervade the classrooms. Sometimes children must wait until they can go home in a break and they may not return at all if the school day is not going well or their home is at some distance away. Even when latrines exist, girls may not feel comfortable if there are no doors to provide them with privacy.[18] As girls reach puberty they may miss school during their menstrual period because the methods they use do not allow them to move far from home.[19] There may not be a supply of potable water. Water might not be available to wash writing slates or to replenish writing supplies. There may be little opportunity for physical activity, or when breaks are allowed they may be short and regimented so that physical activity is limited. In these unhealthy and unsanitary circumstances many children suffer from chronic respiratory and other illnesses that sap their energy. They may not have appropriate clothing to cope with these conditions.

Schools in rural areas of Northwest Frontier Province (NWFP) in Pakistan demonstrate extreme examples of all these conditions, exacerbated in many cases by teachers who have ceased to assume any but a caretaker role. Students are led in memorized texts for a large part of the day by other students beating a recitation rhythm with large sticks. In the stressful, overcrowded classrooms, teachers spend a great deal of time disciplining students for infractions of behavior, incorrect answers, inattention, lateness, and a host of other misdemeanors they feel threaten order. The discipline is often harsh and physical, but it may also consist of holding the child up as an example of ridicule or commenting negatively on some aspect of his or her ability.

Conditions that encourage high dropout rates in the first year are described in a study conducted in 1991 in NWFP of *kachi* classes, the informal preprimary classes that exist throughout the province (at the time of the study this class operated without the benefit of official resources or staff). The study showed the class comprised about one-quarter of primary enrollments in a school and took about one-quarter of staff time. The class was often located outside in the open air, was given the most inexperienced teachers, had no materials designed for the age, and consisted of children varying in age from under 3 to 5 years or more. School staff encouraged the presence of the class despite the problems it created because they felt children needed time "to adapt to the discipline of schooling" and because the

[18] I am grateful to Kurt Moses, who cited a World Bank staff member in Uganda for this observation.

[19] An Indian woman researcher specializing in studies of primary education noted this fact to me. She believed it was almost impossible for girls to continue in school once they had begun menstruating because of the amount of time they would miss.

first grade curriculum was too difficult to cover in a year. Eventually this unofficial class became a prerequisite for entry into the first grade of many schools because first grade teachers did not want to start all over again with newcomers.

It was not surprising under these conditions to find the highest dropout levels occurring in the *kachi* class or before class 1 (43 percent by one estimate). When dropout is high during or at the end of the first year, it usually signals a system that is poorly designed for young children, which indeed was the case in the NWFP schools. As far as it was possible to know, most children who dropped out of the *kachi* class never returned to school. In this initial year of schooling, children were forced to endure the harshest conditions of primary schooling at an age when it would be the most difficult for them to tolerate the physical discomforts of restrictions on food, water, and bathroom facilities.

Academic program and performance

An important determinant of children's willingness to stay in school is their enjoyment of and sense of success in the academic program. When programs are poorly presented and boring, when little real learning goes on and when exams are ordeals, children quickly become discouraged with schooling. This is especially true for children who have difficulty adjusting to rigid rote learning formats inherent in many school systems.

Some of the academic problems include the emphasis on rote memorization, poorly prepared teachers, inadequate instructional materials and aids, inability to effectively assess the learning results of the system, poor support for teachers who must cope with large numbers of students of differing ages and abilities (often in a multigrade context), and high teacher and student absenteeism. These problems are compounded by rigid administrative procedures, a lack of system accountability, and an almost total lack of capacity to reflect on and improve teaching/learning activities in classrooms. In a climate of resource scarcity there are few opportunities for "non-academic" activities such as art, music, and sports that might make programs more interesting. Nor is the course content relevant by example or utility to the daily life of village children.

> Research in Africa "demonstrate(s) that improvements in school quality can have indirect as well as direct effects on achievement, the indirect effects occurring because of the effect on participation (enrollment, attendance and continuation), which in turn affects achievement." (Ridker 1997: 16)

Pakistan's NWFP province again offers a specific example of these difficulties. Beginning primary classes have as many as 100 children crowded into small rooms. The majority of children learn in a language of instruction that is not their mother tongue; moreover, the

instructional materials do not recognize in their approach that it is a second language.[20] Teachers may be absent without penalty for up to 20 percent of the school year, and because the system cannot afford substitute teachers, students must sit patiently waiting for their teacher's return—weeks if necessary—before learning resumes. Classes may have so many children that it is impossible for teachers to provide individual attention. In multigrade classes children may be left for long periods waiting until the teacher is ready to work with their group again. A Pakistani study found that the time spent engaged in learning in multi-grade classes was only about 60 percent of that found in single-grade classes (NWFP Directorate of Primary Education 1992). Children become bored and listless waiting for their turn while trying not to engage in activities that might attract the discipline of a teacher. Tests are developed and administered by classroom teachers until the end of the primary level when for the first time a national test makes it possible to see how individual schools and children fare. Pass rates are set at about 30 percent, because few children are expected to do any better.

Studies conducted in Pakistan in the late 1980s attempted to link educational inputs in schools with student achievement. Few inputs proved statistically significant. However, one that proved to have positive effect was the length of the teachers' academic training. Rural female teachers produced students with the lowest achievement levels, probably because on average they had fewer years of schooling. Students of male and female urban teachers with about the same years of schooling scored roughly the same. The study (Reimers and Warwick 1991) found no difference in the achievement of students of trained and untrained teachers despite the significant time teachers spent in teacher training institutions. Even after this fact was known, higher education continued to be less important in selecting teachers than a teacher training degree, and no effort was made to reform the ineffectual training program. This illustrates the paralyzing disregard for evidence and the absence of mechanisms to effect change that are common features of rigidly bureaucratic systems.

Another study found that teacher trainees, tested before entering training colleges, did little better on grade 5 exams than grade 5 students themselves (Directorate of Primary Education, n.d.), suggesting that there were debilitating deficiencies in teachers' understanding of primary school concepts. Because training schools were geared toward teaching methods, not to upgrading subject knowledge, they could not make basic changes in curriculum that would have allowed more training in subject-content knowledge. A senior education official in Balochistan who interviewed high school graduates for teaching

[20] In Mali a common reason reported for high repetition and dropout rates was the use of French in the early grades (WB Report No. 11842-MLI: 21).

vacancies complained that few candidates could answer basic questions in the national language of instruction, a language that candidates had presumably used throughout their years of schooling. These details serve to illustrate the systemic nature of the "teacher problem" and the difficulties of programs that do not teach instructional languages well—problems that are difficult to resolve in short training sessions.

In Pakistan, Afghanistan, and elsewhere instructional materials compound the already serious difficulties of teachers and children. Textbooks begin by naming letters, then leaping to writing paragraphs without making a transition through sounding-out of letters and words. Indeed because of system-wide expectations for progress (pages in textbooks must be covered against specified schedules), teachers do not have the time (even if they knew how) to compensate for the textbooks' deficiencies. Overall, the books have no systematic link to learning objectives or skill-building, contain few practice exercises, are teacher dependent, and have no way to adequately assess what children have learned. When it comes time for promotional exams, memory and "trick" rather than competency-based test items make exams an ordeal for children. For the Pakistani children who enter the system, survival requires fortitude to surmount all these hurdles. For girls who have "no real need for education" even greater stamina is required.

Unfortunately these symptoms of a poor learning environment and subsequent poor skill development are seen in a wide spectrum of countries. In Egypt, the adolescent study found that although 61 percent of the children had never failed an exam in any subject, one quarter had to retake exams, and 15 percent had to repeat a year. The poorest performance was found among boys, working adolescents, members of female-headed households, and from Upper and Lower Egypt, suggesting that work and marriage were among the consequences of dropout. Students from poorer households were less likely to have passed all their exams (50 percent) than those from more affluent households (72 percent) and twice as likely to have repeated a year (21 percent to 10 percent) (Ibrahim et al. 2000).

Another study in Egypt found that the average math score of a sample of children was only one-third and the reading and writing scores only one-half of mastery. Between 1988 and 1993[21] average scores declined 25 percentage points in reading and writing and 20 percentage points in math. The decline was greatest in rural areas. Girls' scores were higher than boys in urban areas but lower in reading and writing in rural areas, a difference the authors blamed on gender biases in the rural schooling environment (Fergany et al. 1994). BRAC also found that on specially

[21] Interestingly, this is exactly at the point when the system was absorbed in building many new schools, and spending little on program improvement.

developed competency-based exams that, although their students scored higher than comparable students in government schools, they scored nowhere near mastery levels (Rugh and Bossert 1998).

An aspect of schooling that has become well recognized in recent years is the differential treatment of boys and girls in schools and classrooms. Besides affecting their learning outcomes, these biases affect girls' feelings about school and their desire to continue. There are a number of ways that gender bias makes the academic environment less attractive for girls than for boys.[22] Biases are found in how the curriculum is presented; how teachers interact with students; how school opportunities, places, activities, timings and the distribution of resources are organized; staff expectations about the needs and capabilities of girls and boys; and how schools are decorated, staffed, and administered. In addition to these in-school experiences, girls may come to school having less practice than boys in the languages of instruction or of speaking in front of an audience of peers. Society may have encouraged shyness and accommodation in girls while rewarding aggressiveness in boys. Girls, as already noted, may be given less time during the day to devote to learning outside of school because of their household chores, and in school because they are asked to do more of the school's housekeeping chores. They encounter problems with sexuality more often than boys do, including sexual harassment by male teachers in some countries. Girls who become pregnant are far more likely to bear the consequences than the males who impregnate them.

An example of just how pervasive these effects can be is found in school curricula. The topics covered and how instructional materials are designed and presented can be a daily reminder to girls that they are different and usually viewed as less important. These materials in the form of textbooks, posters, and other teaching aids (even exams) often emphasize boys' rather than girls' interests, use pictures and content that reinforce gender-role stereotypes, provide a greater frequency of pictures, stories, and other content portraying boys rather than girls, show males in more active and females in more passive roles, stress the exploits of men and overlook the contributions of women, and use sexist language. Because the materials are presented as a reflection of reality, these biases model ideas and behaviors that children eventually adopt.

Teachers also tend to reinforce gender stereotypes in their interactions with students. In school they may segregate girls and boys in different rooms or areas of classrooms, where they receive different kinds of education, disproportionately less of the teacher's attention and reinforcement, or disproportionately more negative reinforcement. The

[22] For a more detailed account see the ABEL2 publication *Beyond Enrollment* (USAID 1996).

sexes may have different course requirements (for example, in Pakistani middle schools for a time girls were not required to take math) and may be advised to take different career paths. Insidious and often ingrained in the unconscious of adults, these different treatments are often difficult to identify and even more difficult to remedy, and they inevitably lead to an attitude that closely replicates the views of the prevailing society. Girls, as a consequence, experience schooling very differently from boys, and school rather than having a liberalizing effect on societal views, continues to confirm them.

Community values, as one would expect, affect girls' treatment in school. From their studies in Africa, Davison and Kanyuka (1990) list the most common home and school factors that encourage the early dropout of girls. High on the list are factors that suggest a lack of importance given to girls' education: parental bias toward educating boys, social pressure to marry early, an attitude among students that school is not important, a perception of males that school girls have loose morals, a perception among teachers that girls are not serious students, that they are more likely to repeat grades, and that they are less likely to be selected for secondary school. In addition there are beliefs that boys are more intelligent than girls, and that girls are more interested in household duties. Overall teachers provide less support for and have fewer positive expectations for girl students.

Another study in Nigeria showed that although the positive interactions between teachers and boys and girls in the early years were about equal, by the sixth grade they were significantly more positive toward boys than girls (Biraimah 1989 in Miske and Prouty 1997). Other differences included boys taking more of the teachers' time, teachers viewing boys as more scholarly and competent than girls, and girls remaining more passive and doing less hands-on activity and consequently being judged as less competent. It is no surprise that under these circumstances many girls are unwilling or, because of poor academic performance, unable to continue.

Personal issues related to schooling

Personal factors affect children's desire to remain in school. A child, for example, may have chronic health problems. In Guinea, girls who attended school were found to have had significantly lower incidence of intestinal infections than those who stayed home, suggesting an important reason for poor attendance and non-enrollment (Miske and Prouty 1997). A study of adolescent children in Egypt found that 46 percent were infected with parasites and the incidence was higher among rural as compared with urban children (Ibrahim et al. 2000). Children may have handicaps, or even single bouts of illness that start a cycle of absenteeism, failure, repetition, and dropout.

In NWFP, a major health problem affecting large numbers of children is iodine deficiency, which leaves children lethargic and with IQ levels reported to be reduced on average by as many as 15 points. It is unknown (and probably unknowable) how many children drop out as a consequence of this factor alone. Overall, girls in developing countries are known to be at greater risk for malnutrition, and they tend also to receive less medical care than boys (Miske and Prouty 1997: 17).

In African countries, HIV/AIDS has decimated large numbers of the adult population—out of 2.6 million who died worldwide in 1999, 85 percent were in Africa. In Africa, 10.4 million children under age 15 have lost either their mothers or both parents. Many of these children are left to scavenge for food on their own with no time left or supervision to encourage their attendance in school. Women in Africa are infected with HIV at higher rates than men, and adolescent girls are five to six times more likely to be infected than boys because they are preyed upon by older infected men. Girls tend to bear more of the burden of this epidemic than boys by being asked to assume a larger share of the household responsibilities of missing adults.

Individual children may also have difficulties attending school from the fatigue of walking long distances or because they fear real or imagined dangers along the way. They may face teasing by fellow school mates or feel threatened by those they believe will harm them. They may have household duties that make it difficult to arrive on time with completed homework, and they may fear the punishments this and other infractions elicit from their teachers. They may have personality clashes with their peers[23] or have no one to accompany them to school. They may find schoolwork too hard, may feel they cannot succeed, may not feel worthy of parental sacrifices in schooling them, may not feel they are learning, may be distracted by family events, or may feel they need to prepare themselves for their own futures in some alternative way to formal schooling. A child may speak a language different from the language of instruction, or from other classmates, or from the teacher. This is particularly true in African countries with a multiplicity of tribal languages and a lingua franca that is unknown to many rural children. With their greater range of mobility, boys may have more opportunities to pick up these languages than girls who are usually confined to areas closer to home. As noted already, school systems and staff also tend to be less welcoming and encouraging of girls.

Girls may leave school early to marry in some countries, although in Egypt where early marriage used to be common, adolescent girls

[23] Only one-third of adolescent respondents in Egypt reported positive experiences in interactions with teachers and peers at school (Ibrahim et al. 2000).

rarely cite marriage any more as a reason for dropout. Instead data suggest that children who have already dropped out for other reasons, may consider work and marriage as options (Ibrahim et al. 2000). It is not uncommon for girls to leave school for reasons of pregnancy and not return, as was the requirement until recently in Malawi.[24] The bureaucratic nature of most education systems prevents children who drop out from returning for a second chance.

When reasons become one-of-a-kind as opposed to reasons that are cited frequently by a number of children, it is often an encouraging sign that educational participation has become firmly established in a community. Children are only dropping out when a unique set of circumstance forces them to do so. Though as individual problems, these circumstances may be relevant to both boys and girls, they may loom larger for girls because of their relatively more important role in household labor and the lesser importance given to their long term participation in school. In Egypt, for example, family-related reasons for dropout such as household chores, family disputes, or the death of a parent have a more negative effect on girls than boys (Ibrahim et al. 2000).

Conclusions

This chapter has looked at three major and a number of contributing factors that affect girls' retention in primary school. The first, accessibility of opportunities, has potential physical, psychological, and institutional ramifications. The second, parental attitudes toward girls' education, is affected by parents' own backgrounds, their assessments of the relative costs and benefits of education, and the influence of community norms and practices. The third major variable is girls' own attitudes about their participation in schooling. These attitudes may be affected by their feelings toward the academic program and their scholastic performance, by the schooling environment, by the degree of relevance of the curriculum, and by personal constraints. The purpose of this description is to demonstrate the complexity and inter-relatedness of the factors affecting girls' continuation in school and to suggest that constraints may vary in the way they affect different target groups of girls.

We warned that the nature of much of these data are soft, relying as they do on fieldworker anecdotes, a few documented findings in specific locations, and collections of parent, student, and educator views on these issues. Even when well-grounded in reality, what is true in one place and with one group may differ in another place and

[24] The policy was changed to require both the pregnant girl and the impregnating boy to leave school until the child was born and taken care of in an appropriate environment. Then the two could return. A policy study showed a strong feeling in the community that this behavior should be punished, and that leaving the couple in school would set a bad example. The study also found that many boys avoided the punishment (Gender Appropriate Curriculum Unit, Policy Study 1995).

for another group. Consequently this material is best treated as background for studies on location. Its value is in the questions it raises rather than the answers it suggests. To rely solely on generalizable "hard" data would leave us with little more than what is clear already—that girls are often disadvantaged when compared with boys, especially when they are poor, come from certain regions, or are members of minority groups.

Key conclusions

- Most data on causes of non-participation are notoriously soft and unreliable and only generalizable from one context to another with a great deal of caution. To rely solely on hard data would leave us with what is clear already: girls are often disadvantaged compared with boys, and especially when they are poor, or come from certain regions or minority groups.
- A framework for identifying girls' participation issues can be constructed by reviewing in any context whether the three conditions that increase girls' participation are present: accessible schooling opportunities; parents with positive attitudes toward girls' education and willingness to sustain the costs; and girls themselves wanting to go to and showing they are capable of completing primary school.
- Parents probably do not deliberately weigh the costs and benefits of schooling. Where norms of participation are established, girls are likely to enroll automatically, while in the absence of strong norms they may stay home without parental premeditation.
- Increasing evidence suggests that poor academic performance is a major, if not the most important, reason that children drop out of school. For parents who are already ambivalent about girls' participation, poor performance can tip the balance against continuing their daughters' schooling.
- Many primary programs are of such poor quality that they do not compensate for such disadvantages in family background as poverty and illiteracy, leaving the next generation in roughly the same condition as that of its parents.

3. Initiatives to encourage girls' participation

Introduction

John Gillet, AED

Chapter 2 noted several conditions that increase the likelihood of girls continuing to the end of primary schooling. This chapter provides examples of initiatives to encourage girls' participation. Although some may not directly target girls' retention and its constraints, they are included if they lead to that result, even if inadvertently. By arraying the initiatives of this chapter against the constraints of the last chapter, practitioners can develop a matrix of possible actions for solving specific problems. The matrix will also reveal where gaps in the accumulated wisdom require innovative new approaches.

The initiatives described here are included for their insights—they are not necessarily recommendations. As Kane and Yoder (1998) point out, even interventions that meet their goals in one context can have mixed or no significant results in another (13). Specific interventions such as bilingual education or community involvement are often part of a complex whole of inputs, all of which may be affecting outcomes.

A concern that surfaces in reviewing initiatives is the lack of candor in most project documents. Although many describe implementation in some detail, most do not analyze the weaknesses of their approaches, and when they do, they rarely assess the relative merits of these approaches against alternatives. Consequently most documents are not as informative as they might be: almost all projects succeed magnificently and most appear on paper to be worthy of full replication.

> There are still not clear links drawn between the objectives of [projects] and the choice of interventions in many cases. (Kane and Yoder 1998: 18)

The initiatives and lessons learned described below have been gleaned from meager references in the literature and in some cases from personal knowledge of the projects. The intent is to learn from the experiences rather than to make critical assessments of the projects themselves. Chapter 4 will go one step further and selectively choose initiatives that appear to have the greatest potential for cost-effectively achieving the goals of girls' education.

Removing the obstacles to retention

Most initiatives aimed at increasing girls' primary participation fall into four categories, those that expand the supply of schooling opportunities, mobilize support and/or provide incentives for girls' education, improve the quality of schooling programs, and increase the resources available for girls' education.

Initiatives that expand the supply of schooling opportunities

Schooling can be organized almost anywhere—in buildings meant for other purposes, temporary facilities, people's homes, and under trees. Many ministries of education, however, insist upon fully constructed, government-dedicated buildings before committing the other resources needed for formal schooling. Consequently, the high cost and time required for construction denies education to millions of children who become "too old" while waiting for schooling opportunities to materialize. In addition, capital development budgets consume a large share of education budgets that might otherwise be available for program improvements or the search for more cost-effective delivery methods. This section thus considers carefully the relative cost-effectiveness of initiatives.

> "For most countries, providing a full and complete education system for all children...through the use of traditional methods is beyond the scope of foreseeable resources." (Dock and Helwig 1999: 62)

Kane and Yoder (1998) in a literature review, noted that of 78 interventions implemented to improve access, 23 did not report results, 4 failed to produce results, 1 had mixed results, and 50 (in 10 projects) reported they increased access. The interventions consisted mainly of provision of schools (buildings and programs) and community involvement (sensitization, and management of schools). Other interventions included recruitment and training of local female teachers, bilingual education, curriculum revision and provision of textbooks. They also reported 70 interventions aimed at girls' persistence. Of these, 17 provided no information on results, 7 had mixed outcomes, and 4 did not produce results. Forty-two interventions in 11 projects reported actual increases in persistence. The persistence initiatives focused more on teachers and less on schools (than was the case for access). Community initiatives were the most common effective interventions, including economic incentives, sensitization campaigns and community management of education combined with other interventions. Also effective were alternative education programs and scheduling flexibility (Kane and Yoder 1998: 14).

> In the 1960s, most of the World Bank investments were in civil works construction. By the 1970s and 1980s investments turned more to textbooks, teacher training and supervision and community support. Now the demand is for better organization of the inputs, for decentralized decision-making, for better teaching techniques, and assessment of outcomes. (Heneveld 1994: 3–4)

Initiatives to expand the supply of schooling opportunities are by far the most common means by which educators and developers attempt to increase girls' participation. These initiatives have included: providing standard school

A well-constructed school houses children for years and consequently its impact extends almost indefinitely. But construction raises two issues: could resources not be better used to produce higher quality programs or find cost-effective means of delivery that reach more children in less time?

construction, developing cost-effective substitutes, expanding existing capacity, creating alternative delivery modes, and providing other non-construction inputs to the schooling program. Very few initiatives address the question of how to provide schooling without the high-cost of permanent buildings.

Providing standard school construction

Research has shown that where opportunities are limited, significant female disadvantage tends to exist, and when places expand, female participation tends to increase much faster than that of males. Thus expansion of opportunities in itself seems to stimulate the participation of girls more than boys, although boys' rates also rise. The difficulty is that many developing countries are reaching capacity in providing opportunities in the form of fully constructed and furnished schools (Adams and Kruppenbach 1986). Over the last several decades school construction has been a major way lenders, donors, and national governments have sought to expand the education of girls.

Despite the sizeable contribution of foreign aid which has allowed for the expansion of education, it has not ameliorated the overall conditions and quality of African education significantly. (Maclure 1997: 17)

Large-scale construction initiatives

The two largest donor-supported school construction projects were mounted in Egypt and Pakistan (see case studies of both in the annex) in the 1980s and 1990s with support from USAID. During the 1960s and 1970s, the Government of Egypt constructed very few schools so it was not until USAID supported the cost of constructing almost two thousand schools that capacity was measurably increased. An assessment of the Basic Education project estimated that girls' enrollments increased in rural primary schools from 35 percent (897 thousand) in 1981/82 to 42 percent (1.4 million) of total enrollments in 1990/91, or by an increase of 60 percent. In the same period, urban female enrollments grew by 26 percent while urban and rural boys' rates grew by 19 percent.[1]

An intensive study of the effects of USAID school construction in a small number of villages found that grade 1 enrollment increased an

[1] In governorates where girls' rates had been lower from the beginning (Sohag, Beheira, Bani Swef and Assiut) the rates grew at a much faster rate.

A cost-effective home-based school model for primary education

Background

In 1996 Save the Children/US (SC) took over the management of Afghan Refugee Village (RV) schools as an implementing partner with UN High Commissioner for Refugees (UNHCR) in Pakistan. After an assessment of the status of the existing formal schools, SC embarked on an initiative to increase access, promote gender equity and improve program quality in the schools. As one of the first steps in this effort it built upon an already established program of nonformal education to open Home-Based Girls' Schools (HBGS) in Balochistan in 1997. The present 52 one-classroom schools spread over five of six refugee settlements (one still resists the schools) accommodate roughly 1,037 girls in grades one through four. The aim of the initiative was to provide primary education opportunities for girls in conservative Afghan refugee communities who for reasons of distance and/or the presence of boys and men in RV schools were unable to access formal schooling. HBGS classes take place in the homes of literate women who are given student textbooks, teachers' guides, blackboard, chalk and writing supplies, and from grade 3 a tin trunk library of books. The children sit on the ground on a tarpaulin. Children and teachers receive edible oil as an early incentive to encourage participation but this incentive will phase out soon with little anticipated effect on enrollment levels. Teachers receive small stipends to teach classes that meet three hours a day, five days a week, 11 months of the year at a time of day convenient to the teacher and the girls.

Conditions of education

Conditions in the Afghan refugee communities of Balochistan are similar to those found in other developing countries where education services are difficult to deliver:

- Girls require special circumstances if they are to enroll at all, and especially if they are to continue beyond grade 3.
- Resources are scarce both for the implementing agency and in the communities served by the initiative.
- Distance to and between communities makes schools difficult for supervisors to monitor and support.
- Qualified female teachers are hard to find and those candidates who exist may have serious gaps in their education.
- Most parents are illiterate and therefore cannot help their children with schoolwork.

Lessons learned

The lessons learned during this initiative include:

- Providing an all-female secure environment with local teachers helps parents feel comfortable about sending girls to school.
- Incentives (such as cooking oil) can help overcome initial resistance to girls' education in poor communities.
- Effective learning can occur when the barest essentials for schooling are provided: a teacher-supplied room, blackboard, chalk, textbooks, reusable slates for younger children and writing supplies for older children, and teacher stipends.
- A supportive teachers' guide can structure learning and, when used properly, produce good learning results.

- Minimally-qualified teachers can teach effectively with supportive materials after training in their use.
- Supportive supervisor visits can be minimal (once a month) and still produce good results.

HBGS is an evolving program. In its fourth year, some of the difficulties that seemed insurmountable at first have proved amenable to solution. Communities have become less resistent as they see the schools providing children with good literacy and numeracy skills and allowing for conventional religious subjects to be taught. As "invisible" schools, HBGS often stay open during community conflicts when formal schools close or become targets of community violence. With supportive materials it has been found that even minimally qualified teachers can teach as well as more qualified teachers, and on existing exams produce virtually the same student learning results.

New issues

As HBG schools move into higher grades, however, new issues arise: Will girls continue in the program after puberty? Can girls who entered formal RV schools and drop out after grade 3 be absorbed effectively into appropriate grades of HBG schools? Can minimally qualified teachers teach the more difficult curriculum of the upper primary grades that includes many more subjects? Retaining girls to the end of primary is essential, not only for their own benefit but also to increase the pool of female candidates available to teach in HBG refugee schools and inside Afghanistan in the future.

To address these issues, the program will:

- Consider flexible ways to meet the special needs of these older primary girls including accelerated learning, self-instruction where teachers learn with students, peer study groups, etc.
- Focus the academic program on Basic Competencies of Learning (BCL) developed by Afghan educators to set expectations for core subjects in each of the primary grades.
- Institute a twice-yearly competency-based exam for students to identify where weaknesses in the program should be improved.
- Test new teachers and ones about to teach higher grades of primary through a competency-based exam that identifies their levels of subject knowledge thus making compensatory training possible.
- Focus supervisors' monitoring on student learning instead of teacher behaviors, and rationalize their visits to provide more support for new and weak teachers and less on experienced, high-performing teachers.
- Provide self-instructional materials to compensate for poorer textbooks in additional subjects in upper primary grades.
- Focus teacher training on the use of materials, on compensating for weaknesses in subject-content knowledge, and in preparing students for self-instruction through more independent learning and application of knowledge.

A long-term broadly applicable strategy

Improvements in the HBGS program are part of a larger, long-term effort to provide education flexibly to Afghan children inside and outside of Afghanistan. Schools in the settlements, in effect, are the testing grounds to prepare programs and qualified teachers for the time when many will be repatriated to rural areas all over Afghanistan. The students of HBGS are the main hope for girls' education in these areas.

The model is one with broadly applicable elements that might be applied in other refugee contexts or in countries where similar conditions exist and resources are limited.

average of 41 students per school site above the trend of overall increasing enrollments in the area as a whole (i.e., 18 percent over expected enrollments without the new schools). Succeeding years added 30, 29, and 22 students per site. Higher enrollment increases were found among girls (23 percent) than boys (15 percent). In subsequent years the figures for girls and boys were 19 and 8 percent, 15 and 8 percent, and 9 and 7 percent respectively.

As for persistence, the first year of new school operation added 87 students (9 percent) per site in grades 2–6, and where new schools had been open for two years, 127 students (12 percent) were added per site. In the third and fourth years, an extra 104 (9 percent) and 122 (11 percent) persisted. The annual effect was therefore greater on retention than it was on enrollment and of those who were retained more were girls.

Between 1990 and 1994 the USAID-supported Pakistan Education Development Program (PEDP)[2] had as one of its aims to increase primary school enrollments, especially of girls and rural children. It expected to do this through school construction in two low-literacy provinces (NWFP and Balochistan). The schools were to be constructed in rural communities where schools had not existed before but where there were sufficient children to support a school. Previously the small number of primary schools had been mostly dedicated to boys, although a significant number of girls attended the boys' schools (and were counted as boys). Officials believed two schools would need to be constructed in each village to deal with what they believed were parents' desires for single-sex schools for girls. To assess this view, PEDP was preceded by a Human Resource Survey (HRS) of all villages in both provinces to determine where schools were needed, where potential staff were available, and whether parents would agree to educating girls in the more cost-effective alternatives of coed schools taught by male teachers (if no local educated females were available).

Other than buildings, some donor-supported construction projects have produced mapping tools for rational distribution of schooling opportunities, and more transparent contracting and supervision systems.

Negotiations to develop a contracting process delayed school construction in NWFP, but the results of HRS convinced educators to change their policy and open boys' schools to girls, an act that effectively opened opportunities for them in a number of villages. An assessment

[2] PEDP was aborted less than half way through its planned term for political reasons.

(Benoliel et al. 1997), however, found that by the time USAID withdrew, the inherent biases toward boys continued in the distribution of opportunities in Balochistan and NWFP. Despite this, between 1988/89 when PEDP was established until 1994, girls' enrollments increased by 30 percent in Balochistan and by 79 percent in NWFP while boys' enrollments increased by 13 and 9 percent respectively. By 1994 there were 761,300 girls and 1.59 million boys enrolled.[3] In the end 16 percent of new school construction in Balochistan and 40 percent in NWFP was dedicated to girls.

In both Egypt and Pakistan, there were two subsidiary benefits to the construction effort. Preceding the construction, formal mapping surveys were undertaken for the first time to determine where schools existed and where they were needed relative to areas of unserved populations. In some cases these assessments provided a defense against political efforts to site schools where they already existed and to ignore areas of need where residents were less influential. The mapping and survey exercises raised important questions of whether new schools should be located in areas where no opportunities had existed before, thus bringing in new enrollments, or whether a portion of the schools should not also be located in areas where existing facilities were so overcrowded they might be excluding children. Over the long run more children would be accommodated through the former approach, but the political pressures from the latter, more densely-populated communities were often greater. In both countries, officials chose to build schools in each kind of site.

In both countries, also, construction was preceded by the development of a more transparent contracting, implementation, and supervision process to cut down on graft and substandard construction. Despite these efforts, informed observers believed that construction contained 5–25 percent of "unseen" costs. To these costs have to be added the expense of overbuilding in anticipation of poor construction (as in Egypt) and private supervision services whose aim was to catch the more egregious problems of poor building practices. In the end, schools cost significantly more than their actual cost. An additional difficulty arose in Egypt when the government reneged on its agreement to maintain the buildings and they began to deteriorate.[4]

[3] To be fair, there are many reasons to believe these figures were incorrect: during this time many "paper" schools were eliminated from the records, a better information system was installed, and many girls previously counted as boys were counted accurately as girls.

[4] The GOE is reported to be doing better now in meeting this obligation. An ingenious process was worked out to solve several contracting and maintenance problems in a rural development project in Egypt (Shrouk). The community contributed up to 25 percent for the construction of a school and the local village/town council contracted and supervised the work, presumably with a lower level of corruption because it was their own money. Upon completion, the school was handed over to the community to provide maintenance and to the MOE to provide teachers, furnishings, and supplies.

Political will and the impact of construction

In Oman, political will and increased resource allocations made it possible to increase schooling participation very quickly. In 1970 when the national education program started, there were three boys' schools with 909 students. By 1988/89, there were 703 primary and secondary schools with 294,934 students. The gross enrollment rate for females at the primary level by 1988/89 had reached 95 percent, and girls comprised 46 percent of primary and 51 percent of secondary enrollments (Rihani 1993). Oman is not a wealthy country, and therefore the allocation of funds to provide schooling places meant sacrifices in other sectors.

Community-sponsored construction

In Kenya, rural communities attempted to duplicate the high quality facilities and opportunities of urban, government schools. The ***harambee*** (self-help) movement started as a result of the rural population's frustration at being left out of the country's modernization schemes. Communities in Kenya[5] gathered funds and constructed their own secondary schools, the expectation being that they would then receive resources from the government for the academic program. However, as ***harambee*** schools increased in number, fewer government resources were available and communities found it difficult to sustain the expensive schools. Roughly half failed before they were completed.

There was no doubt that the ***harambee*** schools increased the participation of rural children significantly. However, most ***harambee*** schools could not afford the quality inputs such as good teachers and special facilities like science labs that allowed students to compete successfully for places at higher education levels. Significantly, when the government decided to support the schools with inputs such as teacher salaries, the results were only marginally improved, and at the same time the government was left with fewer resources to spend on equalizing opportunities for poorer communities who could not afford their own schools. In the long run, the community initiatives helped some children while deepening the differences based on gender, region, and wealth without significantly opening up the opportunities villagers sought (Rugh and Bossert 1998). The ***harambee*** initiative demonstrates very vividly how mortars and brick do not guarantee educational access or quality.

Despite these difficulties, school construction is still a significant intervention in the future plans of some countries. The Government of Morocco, with help from the World Bank, for example, plans to

[5] *Harambee*-like initiatives are also found in other African countries. In Kenya they first supported the establishment of primary schools until the primary level was taken over by the government.

raise girls' enrollment by almost 20 percent between 1996 and 2001 by constructing schools and increasing access to clean drinking water and sewage. The intent is to increase girls' enrollments in rural areas from 34 percent in 1996 to 55 percent in 2000, through building schools closer to girls' homes and improving access to clean drinking water and improved sanitation facilities. To encourage girls' participation in particular, some communities are also building boundary walls, latrines, wells, and canteens. Similarly in Egypt, after a hiatus on major construction, USAID will support the construction of roughly 800 new classrooms (in combinations of one, three, or more rooms as needed) in a new community schools project.

> Community involvement has been most effective in the early stages of school establishment when the conditions are being set for girls' participation.

Developing cost-effective substitutes

A number of initiatives have aimed at reducing school construction costs. Many countries now find it impossible to afford standard schools for all children. Donors and lenders have made up some of the shortfall in the past, but it is unlikely they will be willing or able to continue doing so. Perhaps this is why they have been at the forefront of efforts to find less costly alternatives and to model their advantages to local governments.

Cost-sharing initiatives

Cost-sharing initiatives tend to be of several kinds, with benefits accruing to different groups. The costs of some may be roughly equivalent to those incurred in constructing normal government schools, but cost-sharing arrangements lower the cost to governments (while increasing the cost to parents). Or they may use less costly materials to the benefit of everyone. Or rarely, the government may take on more of the costs (as in fee waivers) to the benefit of parents. The prevailing trend is to assign more of the burden to parents, often accompanied by use of less costly construction materials.

One study has warned against the approach of expecting parents in African countries to assume more of the burden of education costs. What has been thought of as community financing of education, it reports, turns out to be household financing, i.e., parents pay the bulk of community contributions. The current squeeze on ministry resources comes from continually escalating costs and the already heavy dependence in some regions (Africa, for example) on parental support for recurrent costs, making it difficult to substantially reduce government expenditures further (Maclure 1997: 17). Expecting parents to pay more may result in falling enrollments and early dropout.

In Mali, the cost-sharing burden falls more heavily on parents (see annex), yet with some cost efficiencies in school components. There are four ongoing community school models in Mali, three in the south and one in the north. One major cost saving derives from community-constructed schools. In three initiatives, rural parents contribute their labor and local materials while the donor pays for corrugated roofs and wooden window and door frames. The final initiative in the desert regions of northern Mali is supported through loans and facilitation by CARE. Local communities purchase tents to use as schools. There are similar initiatives to reduce costs through community support in Ghana, Guinea and Malawi. USAID supports these projects as a way of demonstrating to local governments that there are ways to expand places, improve learning, and at the same time reduce the costs to governments (Tietjen 1999: 88).

One of the common methods governments use to reduce the costs of establishing rural schools is to require communities to donate a plot of land for the school (see annexes on Egypt and Pakistan). Critics of this approach say that urban communities are not required to make land available and it is therefore unfair to ask poor rural communities to do so. In Mali, educators answered these complaints by proposing fees for urban students equal to the amounts contributed by rural students. Proponents say that land is much more costly and difficult to find in urban areas, and therefore the community could not afford the cost. Without rural land donations, they say, schools would be significantly more expensive, and there would be far fewer of them.

Interim or substitute facilities

Another approach to cost-sharing is to ask villagers to provide an interim or temporary school facility. The Community Support Project in Balochistan required communities to show their seriousness in educating girls by providing such a facility for several years before the government constructed a standard school. Since a number of girls' schools had previously been opened and then closed for lack of teachers or students, this interim school ensured not only that costly schools would ultimately be used, but also that education could be delivered to girls expeditiously without waiting for schools to be built. Egypt's community school project (supported by UNICEF) also required communities to build or donate a facility, in this case for as long as the school was needed.

One of the most cost-effective approaches to the problem of schooling venue is that used by BRAC[6] in Bangladesh. For a three-year cycle of roughly 30 students taught by one teacher, BRAC rents a low-cost room

[6] BRAC (Bangladesh Rural Advancement Committee), though considered a nonformal program, has come to be seen as an equivalent for the first few years of primary. Many of its students go on to the formal system.

Mosque schools in Pakistan

The Government of Pakistan opened mosque schools in 1978 to provide schooling access at low cost to village children. The schools:

- were staffed with regular primary teachers;
- taught normal curriculum with free materials;
- paid the imam a stipend to teach religious subjects;
- were supervised by the District Education Office; were held for four hours a day so as not to interfere with prayers; and
- had a three-year course from which qualified students could enter formal schooling.

Girls' participation increased when no school had been available before, when the schools were located nearby, and when imams encouraged their participation. (Anderson and Chaudhry 1989)

that has been renovated by parents. At the end of the cycle the room reverts to its owner if there are not enough children to form a new cycle.

Pakistan similarly rents a number of primary schools, especially in urban areas, classifying them by the misleading name of "shelterless schools." However education officials disapprove of these schools and try to replace them as soon as possible with new construction or by purchasing existing buildings. They are not, in other words, intended as cost-saving initiatives.

In Punjab a project to use prefabricated materials in school construction failed when it met resistance from local government officials, and in Egypt efforts to encourage community-supported school construction also met with the resistance of the Ministry of Education, which favored standard school designs. In Kenya, temporary classrooms were said to be far less sanitary than standard classrooms (Nkinyangi and Van der Vyncki 1995). It seems premature, however, to condemn "temporary" buildings for human problems that are not a consequence of a particular building type.

A number of issues are raised by initiatives like these that reduce the cost of physical facilities with interim structures. Critics argue that interim schools are usually not built to withstand the wear and tear of many children, that they require more maintenance and are less comfortable in extreme weather than standard schools. Some very creative minds, however, including the famous Egyptian architect Hassan Fathy, have developed school plans that are more functional, comfortable, inexpensive, and aesthetically pleasing than standard schools, and yet these too have failed to gain acceptance. Much of the resistance to the so-called substandard schools comes from government bureaucrats who believe that educational quality is linked to presentable schools.[7] The problem may also be related to the inability of many ministries of

In Pakistan, programs where students are high achieving are "no more likely than poor (achieving) schools to have a building" or other facilities. (Warwick and Reimers 1991)

[7] Indeed, since teachers feel an obligation to teach manners and respect behaviors, the appearance of a neatly organized school is seen by them as one where better education can take place (see Rugh 1981).

education to prepare the cost-comparisons necessary to make informed judgments about different options. A rented school appears as a permanent drain on education budgets, whereas the costs of a built school disappear after it is completed.

Expanding existing capacity

Some officials and local school staff, by policy fiat or informal practice, find innovative ways to increase capacity in existing facilities.

Overflow space

Many schools in Pakistan (as in other countries) hold classes on school verandas or under makeshift rush shelters outdoors. Younger children occupy these makeshift arrangements while the few children persisting to the upper grades and seriously engaged in preparing for promotional exams occupy large classrooms furnished with desks and chairs. IMPACT encouraged parents to build study shelters to accommodate larger numbers of children and make it possible to implement a new kind of teaching-learning methodology.

Shifting

One of the most common and practical ways to solve the problem of inadequate space is double-shifting. Egypt, with its high population growth rates, has resorted to two, three, and sometimes even more shifts. In Egypt double-shifting involves two separate "schools" using a single facility, one in the morning and one in the afternoon. Most recent five-year plans have called for eliminating multiple shifts in Egyptian schools, believing it produces an inferior academic program. Studies have shown, however, that double-shifting can be organized so as not to negatively affect learning as long as different sets of staff are used in the two shifts and care is taken to allot the same amount of time to instruction as in a single-shift school. Girls, however, have tended to suffer more from "shift" solutions than boys, because they may have incompatible household work schedules or, if assigned to the later shift, may be tired from their chores. Nevertheless, shifting is a practical solution to the high cost of construction, especially where governments have not yet been able to extend schooling to all children of a community.

Other unique approaches

Egypt has adopted two other approaches in trying to solve its space problems. The most unusual one used by some schools is the so-called "flying classroom," where one class moves from room to room occupying the places of students who are taking physical education. In 1987, Egypt decided to drop the sixth grade from primary schooling, hoping thereby to expand places at the primary level. The experience was not successful: first, the Ministry of Education found that the transition to

fewer grades left gaps in the learning of some children who suddenly skipped to higher grades; second, it produced an enormously difficult to accommodate "double-cohort" moving through the system up to and including university; and finally, overall learning deteriorated as a result of fewer years of primary education. In the near future Egypt plans to revert to a six-year primary system.

Providing flexible delivery systems

Some circumstance make it difficult to provide schooling because settlements are scattered, remote, nomadic, transient, or in other ways difficult to reach. There may be problems finding qualified teachers or the supply of teachers may be limited and girls in some conservative societies may have difficulty appearing in public after a certain age. Some governments have solved these problems through flexible delivery systems that focus more on the needs of the populations being served and less on rigid expectations for formats of schooling. Some examples follow:

Teachers as agents of delivery

India has experimented with a number of ways to approach difficult-to-reach communities, using "barefoot" teachers to accompany nomadic groups, extracting indigenous children from their communities, training them in boarding schools and sending them back to teach, and assigning teachers to travel with brick-making construction workers to the next job. India has thousands of NGOs and other voluntary groups dedicated to teaching children in communities where it is difficult for them to obtain an education or to persist for long in the system.

Flexible delivery formats

Most school construction programs have criteria (whether strictly observed or not) for locating schools, usually conforming with parents' feelings about proximity and the safety of children. Where it is practical, some education districts separate lower and upper primary sections into small feeder lower schools near the child's home and consolidated upper primary schools further away but accessible to children coming from the feeder schools (Pakistan). As far as we know there is no research to indicate whether this separation of stages leads to higher dropout as children make the transition from one to the other. BRAC schools serve as de facto neighborhood feeders for the fourth grade of the formal system, as do Community Schools in Egypt into formal intermediate schools.

Increases in primary enrollments also put pressure on the next higher stages of education. Governments (e.g., Pakistan and Egypt) are beginning to look for ways to construct facilities for these higher stages nearer primary schools to encourage graduates to continue. In Pakistan

there is higher likelihood that children will continue their education after the primary level if they study in a grades 1–12 school than if they have to move to a separate location.

BRAC is the best known of the programs that are shaped to local needs rather than to rigid formal requirements. BRAC schools offer two courses, one of three years for primary-age children with a program that ensures an academic link to the formal system (90 percent enter formal schooling), and the other for older children (11–14 years) that compresses the five years of the primary curriculum into three years, and includes life skills.

Lessons learned from BRAC's primary school model

- Features (small schools, local teachers) that are needed to increase girls' access and persistence need not make schools expensive.
- Part-time paraprofessionals can make good teachers for lower grades, if they are adequately trained, supplied with a structured curriculum, and are adequately supervised.
- Primary participation can be improved even with hard-to-reach groups if programs are tailored to their needs.
- Implementing a basic, no-frills curriculum fully is better than partially implementing a more comprehensive one.
- BRAC schools are not handicapped by occupying rented facilities.
- Involving illiterate parents significantly in schooling requires participatory structures and ongoing follow-up
- NGOs have the potential to pilot innovative technologies and new delivery methods.

Adapted from Ahmed et al. 1993.

The UNICEF-supported community-school program in Egypt, is modeled on BRAC, and like BRAC it adapts its schedules and program content to village children wanting to make the transition to the formal program. IMPACT in the Philippines developed self-instructional materials that after the early years of primary allowed children to proceed at their own pace with little intervention by a teacher. This meant children could return to school after being absent and resume their study where they left off.

Cost-effective programs

Mali's community school models (described in the cost-sharing section above) compare favorably for cost effectiveness with current government primary schools (and they cost much less for the government). Altogether 1,500 three-year community schools are supported by USAID in the south of the country through Save the Children (STC), World Education (WE), and Africare. The variations in the three models create an interesting basis for comparison. The WE model is essentially the same as the government schools except for the help provided by WE in establishing the schools. STC schools have enhancements to the basic model in the form of specially prepared materials and beginning classes conducted in the local language. Africare schools

have just started, and their model is not yet well defined, but it includes a comprehensive service approach that includes not only education but visits by health specialists. These "low-cost" models cost $36 per child in the WE model and $54 per child in the STC compared with $42 per child in the government schools (although if expanded to grade 6 the costs would be equivalent in the STC model).

Although the community models have several cost-saving elements (community-assisted construction and furnishings, and lower teacher salaries) these are offset by the increased costs of training and teacher support, and in the case of STC students, the specially prepared materials they receive. To make this a cost-effective input would require that children show a 30 percent higher achievement than in WE schools. Parents now pay a large share of the costs and in the future will be asked to pay even more, raising equity concerns about the costs to poor parents (60 percent of school costs for the WE model). The WE model (without the enhancements of STC's model) could eventually make it possible to educate twice as many children at the same cost to the government that it now pays (Tietjen 1999).

"Packaged" programs for severe conditions

In Afghanistan, conditions are unique both because the government has banned girls and female teachers from public schools, and because the government provides practically no support for a public system of education. In response to this situation, Afghan educators, with the support of the international assistance community, are developing a quality "package" of tested materials, teacher instructions, and assessment items that with minimum orientation for the teacher can be used to provide primary schooling for Afghan children in almost any setting within or outside of Afghanistan. This package reduces primary education to its essential elements and makes it "transportable" so that children under difficult conditions will be able to pursue the equivalent of a formal education under the supervision of a minimally prepared adult. Programmed materials may be the next step for older children.

Afghan education

Only 5 percent of children in Afghanistan are being educated. The future of Afghan education is uncertain. In 1998, a strategy was developed to improve the quality and flexible delivery of primary education to Afghan children. The strategy is based on:

- developing a set of standards (agreed-upon competencies) for math and language arts at each grade of the primary level;
- preparing quality stand-alone instructional materials that address the competencies, provide practice and assessment items, give simple directions to teachers, and include practical content relevant to the needs of villagers; and
- building the capacity of Afghan NGOs to support and deliver the instructional packages.

Cost-effective outreach

A review of instructional hardware makes the unequivocal conclusion that television is not a cost-effective alternative to classroom instruction but that radio is effective in improving both coverage and quality of instruction (Anzalone n.d.). Interactive Radio Instruction (IRI) in recent years has focused more attention on gender issues and programs for women. IRI has been used in more than 20 countries since 1974 including early childhood programs (Bolivia, Nepal) and primary level courses in math (Thailand, African countries, Haiti, Nicaragua, Honduras, Bolivia), science (Papua New Guinea), language arts (Haiti), foreign languages (Kenya, South Africa, Dominican Republic, Costa Rica, Pakistan, and Bangladesh), health (Bolivia), civics (Haiti), environmental education (Costa Rica), and critical thinking skills (Ecuador). IRI has also been used for teacher training (Indonesia) and adult education (Honduras). The transportability of the programs either through broadcasting services or audiotapes means children can obtain quality instruction even when fully qualified teachers are not available or the small numbers of students or their remoteness make it difficult to afford a normal program (Dock and Helwig 1999).

The advantages of IRI are its cost effectiveness, its demonstrated academic results that are usually equal to or higher than comparable formal programs, and its potential teaching-learning benefits. For example, it can compensate for poor teacher preparedness and a lack of specific skills (such as foreign languages). It can model new and perhaps more effective teaching methods, and provide a more uniform teaching standard across regions so that a poor rural child theoretically can receive the same quality of lesson as a well-to-do urban child. Critics have pointed out the weaknesses of IRI: the time that may be wasted in waiting for the broadcast; the fact that some children may not respond well to IRI's participatory methods, and the fact that some skills such as reading and writing cannot be taught by radio. Thus, IRI cannot substitute for good materials and taeachers. Another downside of IRI is that officials of some countries have difficulty accepting the idea that radio technology can be effective when it differs so radically from traditional delivery. They may also resist the high costs of program development. Nonetheless, under certain conditions IRI can be a potent instructional tool.

Early childhood development and interactive radio instruction (IRI)

Bolivia's ONAMFA (National Organization for Children, Women and the Family) and USAID's LearnTech project developed a program in 1993 to train caregivers to stimulate early learning in children. The IRI methodologies are presented in an audio series that engages young children and caregivers in activities appropriate to the children's age. The children participate in an educational and entertaining activity while the caretakers, who have poor literacy skills, learn child development. (Bosch and Crespo 1995)

IRI's potential has not been fully tapped. It might also help girls continue their education in environments like Afghanistan where schooling may be interrupted before the end of primary not only because of conservative attitudes but also because teachers cannot cope with the more difficult subject matters in the upper primary grades. By the third grade many Afghan girls may be secluded at home.

Improving existing infrastructure and providing other non-construction inputs to schooling

Donors are often urged to improve physical facilities in the belief that better infrastructure attracts more girls and improves program quality. However there is little evidence that structures alone increase girls' enrollment or improve program quality. Anderson and Chaudhry (1989), for example, found that the standards of equipment and buildings in mosque schools did not have a differential effect on girls' and boys' participation. Girls' enrollment appeared to depend less on the quality of the facilities than on the fact that they existed and were nearby. The Asian Development Bank's girls' schools in Pakistan were not any better attended than others, even though they were built on the premise that large, well-endowed schools would be more attractive to girls. Similarly Warwick and Reimers (1991) found no evidence that a school's facilities related in any way to student achievement. Rugh (1991), however, found that the physical appearance of a school influenced supervisors' impressions about the quality of the academic program in them and that there was some relationship between their perceptions and actual student achievement. One explanation for this effect may have been that supervisors preferred large, well-staffed schools, characteristics that Warwick and Reimers (1991) also found related to higher achievement. Overall however it is unlikely that construction in and of itself is responsible for good student learning.

Other physical inputs

A number of non-construction physical inputs have been provided to schools in an effort to make learning more attractive and to encourage more enrollments. Textbooks are perhaps the most important input. It is not uncommon in rural areas to find several children sharing textbooks, to find books missing altogether or arriving several months after school has started. The Government of Balochistan provides textbooks to rural children to encourage their enrollment but, compared with NWFP where parents buy books from private dealers, Balochistan has more difficulty getting the books to schools on time or in sufficient numbers. Because the books are made of poor quality materials, they often do not last the year, nor can they be reused. Nevertheless, they provide an important incentive for many children. Their cost, however, is becoming prohibitive for the government, and the need to keep production costs low has affected their quality in the past.

A significant amount of the NWFP budget was allocated to school furnishings in new schools. Blackboards and teachers' desks and chairs were useful and generally appreciated items. However, many of the children's desks and benches were piled in corners because they took up too much space and couldn't accommodate the numbers of children in the lower classes. They thus occupied classroom space and the attentions of supervisors who had to inventory them every year. Since most rural children sit on the floor at home and are not accustomed to benches and desks, this was a needless expense. Another largely unused input was kits with instructional aids a teacher might use to demonstrate subject-matter concepts. Teachers were often untrained in the use of these materials, were not accustomed to using these items in teaching, and were afraid they might have to pay for any damage that occurred to the items during class. Libraries of selected books met the same fate, many remaining unused and locked up in head teachers' offices (Warwick, Reimers, and McGinn 1989). In parts of Afghanistan UNICEF provides writing supplies to children, and while these are undoubtedly useful, the example of next-door Pakistan shows that renewable materials such as quills, slates, and wooden writing boards may be better and longer-lasting investments.

In general there are limitations to the accomplishments that can be expected from physical inputs alone. Construction can have an impact where schools did not exist before, but it will not in itself improve academic performance, nor is it necessarily the best use of resources. Provision of textbooks can have an effect where few existed before or were too costly for parents. Only some furnishings and supplies—in particular ones related to instruction such as blackboards—are likely to be worth their cost. All diminish as an incentive over time if the costs of sending children to school relative to family income becomes a burden.

Increasing the numbers of qualified teachers

Lack of qualified female teachers who are willing to work in rural areas has been a major deterrent to girls' programs. The Directorate of Primary Education in Balochistan, with support from UNICEF, organized a Mobile Teacher Training Program (MTTP) to support minimally educated local women to become primary school teachers in community schools. The program consisted of short intensive workshops, starting with "emergency" support, and over time building the practical as well as theoretical skills of teaching. Eventually the young women were expected to complete other requirements to gain their credentials, including completing matric diplomas and participating in further teacher training. The government of Balochistan waived its usual requirements for teacher selection in order that these teachers might be paid and begin teaching immediately. This program has had difficulty over the years keeping up with the large expansion in girls'

schools, which ultimately overburdened existing NGO capacity to follow-up and monitor the paraprofessional teachers.

BRAC has also implemented a successful program of upgrading underqualified, usually female, teacher candidates from villages where BRAC schools are established. BRAC pays its teachers considerably less because they lack full qualifications. A problem with these teachers in any system is that they often do not have the academic skills to teach above the early grades of primary where more complicated coursework and the addition of foreign languages requires a more sophisticated knowledge.

Initiatives that mobilize support and provide incentives for girls' education

The second large category of initiatives aims at stimulating demand for education. It mobilizes parents to support girls' education and provides incentives to enroll and keep girls in school.

Mobilizing parents and girls in support of education

Mobilization campaigns

Malawi's GABLE project is the best-known effort to mobilize communities in support of girls' education. Through local rallies, radio broadcasts, and a theater-for-development group, it brings messages supporting girls' education to individual communities. The theater group lives for several days in a village, taking part in daily activities and learning about education issues and barriers to girls' education. At the end of this time they play out these issues in skits, and convey messages about girls' education using adapted local songs and dances. Communities develop action plans and community development officers follow up and support their implementation. During the time this program was first being implemented the government announced fee waivers for the primary level, which led to large increases in enrollments for boys and girls.

GABLE specifically addresses "completion" issues by working with initiation counselors and parents to show the benefits of girls completing their education. Some of these counselors have become effective advocates for girls' education. Female troupe members, because they are university students, also act as role models in these

Changing Community Norms

Social scientists have been interested for a long time in how social norms change and whether governments can do anything to change people's values. A new field called behavioral economics suggests that people tend to imitate other people's behaviors and that they "often act more like sheep than like rational individuals." With elaborate computer models, one scientist is trying to understand what happens when "norm cascades" occur—when communities shift rapidly from one norm to another. Based on his model, Picker believes governments can do little to change norms from above. Rather they should "seed lots of little pilot programs" in a process he calls "norm perturbation." Sometimes it will cause a cascade, or "if the government is wrong, the new norm will die off very quickly with no harm done." (Rosen 1997)

Social mobilization campaign for educational quality (SMC-EQ)

SMC-EQ in Malawi supports small local initiatives with potential for improving student learning:

- The Kambiri School Committee put on a play to explain to parents the importance of student attendance.
- The Chinguwo community donated balls and uniforms for extra-curricular games; the result was better attendance and the return of some dropouts.
- In Yambe school, trained teachers set up a school-based resource center to provide training for untrained teachers.
- The Naliswe School Community decided that school time lost on Fridays could be made up by extra periods during the week.
- Teachers and parents from Mangochi raised funds to construct latrines so children would not have to go home to the toilet.
- Parents of Namasawi School bought drinking cups and released children from home chores to carry fresh water to the school.
- Communities around Chiluwa II School constructed schools while their traditional Gule Wamkulu dancer provides entertainment.
- Open days were revived in many schools so school staff could explain teaching methods and goals to parents.
- Parents provided inexpensive locally made learning materials such as slates made from local clay, and chalk from cassava.
- School and community leaders took students from Kafulafula School to visit role models in jobs at the University, the court, and broadcasting stations.
- Parents at Nkhonde School planted a vegetable garden to teach students agricultural skills and earn income for the school.
- Volunteers teach in Khaula School and their basic needs are met from the proceeds of a community saw-mill.

These activities are communicated through the weekly SMC-EQ radio program and a calendar with pictures of the activities.

communities where it is rare to find highly educated women or any females for that matter employed outside of household production and manual labor.

Communicating messages about the value of girls' education

Several countries have used the media—radio and television—to promote messages about education explicitly or indirectly. Egypt has broadcast messages about the importance of education (often in conjunction with family planning messages) and indirectly as themes in the story lines of popular television series. The "soap opera" series has proved successful in establishing the importance of education for girls. Pakistan has used billboards to promote education. In both countries, however, a general distrust of government reduces the impact of direct messages about education.

Involving communities in the establishment of schools

As already noted in the cost-sharing section above, a number of initiatives worldwide have incorporated community involvement as a major component in their design, usually to reduce the costs of education to government but also as a way of mobilizing support for primary education generally, and in most cases especially for girls. Examples include *Fe y Alegría* and *Escuela Nueva* in Latin America, BRAC in Bangladesh, IMPACT in the Philippines, the Community Support Project in Balochistan, the Moroccan Education for Girls Project, and

Egypt's Community School Project

In 1992 the Ministry of Education, with support from UNICEF, opened four schools for 121 students. By May, 1995, there were 34 schools with over one thousand students. The initiative, targeting girls in rural communities, aimed to:

- involve communities in the construction and management of schools;
- use NGOs to facilitate the hiring, training, and support of local staff;
- employ a child-centered approach to learning organized around learning centers, self-instructional materials, and regular assessment;
- provide a program equivalent to primary schooling, yet scheduled according to the needs of the community;
- have teacher-facilitators selected by local school committees; and
- develop a model that is easily sustained and replicated.

Community School Projects in Egypt, Mali, Malawi, and Ghana. For the most part communities provide labor and financial resources, select sites, identify students and local teachers, determine school schedules, and provide monitoring and local oversight over the schools. They may also troubleshoot problems and establish a link with education officials. NGOs usually are necessary to facilitate this involvement.

The expectation is that when parents have a stake in creating the conditions for and managing the local school, they will be more likely to enroll all their children, especially girls. Enrollments do appear to have increased in education projects having a community involvement component (see Rugh and Bossert 1998). The major criticism of these initiatives, especially those supported with outside help (such as those with NGO and donor support), is that they are likely to have sustainability problems when the support is withdrawn. The problem may be due to the lack of attention in project designs to the long-term incentives and structures that need to be in place before support is withdrawn. *Fe y Alegría* is perhaps unique in its efforts to become involved with the community. To make sure the school is lodged in the local context, staff members live within the community, develop special programs to meet local development needs, and ensure that the school is at the center of local festivals and celebrations. Parents are actively involved in all its programs and activities. *Fe y Alegría* views its institutional role as primarily supportive and communicative of good ideas that originate in local communities, rather than authoritarian or directive of what should take place (Swope 1999).

Another effort in Tanzania encouraged communities to take responsibility for their own schools. A community education fund was established by a donor to provide funds on a matching basis with funds raised by communities. The aim was to encourage community improvements in local schools. Communities were given double the total in fees they collected from students, after they submitted a plan for the use of the money. The results were that parents' contributions increased consider-

ably, acceptable plans were developed, and improvements (usually consisting of construction) were made. The activity seemed highly motivating to parents. The drawbacks were the costs (to be sustained they would have to be taken over by the government), the potentially less-effective future implementation by non-NGO bureaucrats, the questionable use of funds for building rather than for textbooks, etc. Villagers continued to believe that governments should provide these other inputs, and the fund in the end only supported those activities for which the community was already responsible (Suleman Sumra in Ridker 1997: 4–6).

PTAs and school management committees (SMCs)

Some projects facilitate the creation of PTAs and SMCs as a way of involving parents in a long-term relationship with community schools. These groups are intended to provide on-site supervision, improved quality and accountability. However, Ridker (1997) reporting on nine projects in Africa says that, though intended to promote parent participation, there is no evidence that the long-term goals of participation were realized, nor did the projects turn effective control over to parents. He suggests that poorly educated parents are reluctant to challenge teachers, and do not know what quality entails. Nor are teachers accountable to parents, at least partly because parents have no control over the terms of teacher employment, what they teach, or how they perform (Ridker 1997: 17). In many cases parents lose interest because they see these organizations as vehicles for government fundraising. In an effort to change this view, the NGOs involved in the Community Support Program (CSP) in Balochistan were asked to establish school management committees (using the same model as that of the CSP girls' schools) in all villages where public schools exist, and to distribute resources to them so they could maintain and repair schools as needed.

The CSP also supported the establishment of women's village education committees (VECs) in Balochistan. Now there are roughly one thousand of these groups, each with five members on the model of the men's VECs. In these conservative areas, it has proved difficult to integrate the sexes into a single VEC. The women, however, have proved better at sustaining attendance and other daily activities in the all girls' schools.

Maclure (1997) notes that in general the efforts to involve parents in school maintenance and management in Africa have been disappointing. He notes that initial involvement tends to weaken over time leaving little evidence that parents are seriously involved in day-to-day management. Overall, communities have not assumed long-term responsibility for schools as expected. A deterrent has been the marginal role they

have been given by school authorities, and the general assumption that schooling is the responsibility of the state. As a revenue-generating effort, drawing on community financing generally only ends up being an additional burden to households. Maclure observes that parents have become disenchanted with the processes and products of schooling as costs have risen with little return in terms of employability (1997: 8, 9, 19–20).

Parent education programs

Several initiatives (IMPACT, *Fe y Alegría, Escuela Nueva*) involve parents in after-school education courses to keep their commitment to the school strong. Reports suggest that these courses were not well-attended in IMPACT, at least partly because IMPACT staff related to parents in a fairly directive way. Parents did, however, help care for gardens that became a financial support for the schools. *Escuela Nueva* has also provided education courses for parents, but they have not been very successful, largely because the programs depend on teachers taking the initiative to organize them. After-school programs have been more successful in *Fe y Alegría,* which puts community development at the center of its program and consequently is more responsive to local demand for programs. Communities may apply for funding to initiate pilot programs that interest them (see Rugh and Bossert 1998).

Overcoming hostile views of schooling

In some countries school may be seen as an alien arm of the government, staffed by outsiders, and teaching content that has little relevance in the lives of local people. *Escuela Nueva* tries to overcome this feeling by starting the school year with a community meeting where maps are drawn on the school wall depicting the village and every family's home. During the year students interview community members and develop reports on the socioeconomic and cultural aspects of the village. While *Escuela Nueva* probably has greater community involvement than other models, community activities are the first activities to be dropped when scaling up to a much larger number of schools. Placing the burden of maintaining relations in the community on teachers after a hard-day of work and with no extra pay means that these activities quickly decline (Rugh and Bossert 1998).

The NGOs in Balochistan also expended considerable effort in overcoming local suspicions about projects involving the government. They did this by setting up a fully transparent system of selecting a teacher, testing the candidate and publishing the result, and following a step-by-step process providing evidence from every side—government, NGO, and community—that commitments would be kept. The NGO as a trusted local entity was essential in this process of anticipating the reactions and resistance of parents and overcoming them.

Adult education

Programs for adult female education have been proposed as a way to support girls' education. Parents' educational level has been suggested in a number of studies (see Filmer 1999 and others in the previous chapter) as promoting enrollment and persistence. Fergany notes that an educated mother in Egypt also exerts a significant impact on cognitive achievement (Fergany, Farmaz, and Wissa 1996). Deolalikar adds that mothers' education seems to be more important in poor households (Deolalikar in Ridker 1997: 7). In all of these cases education was probably acquired in childhood rather than as an adult. Adult education may not have the same impact on daughters' education.

In Nepal, for example, literacy classes are believed (although data are not yet fully analyzed) to have increased the schoolgoing behavior of participants' daughters, and from self-reports of having involved the mothers more in homework and other supportive behaviors. In Bolivia and Honduras, longitudinal studies are now being carried out under USAID's Girls' and Women's Education (GWE) activity to find out the effects of providing literacy courses to adult females. One would need to look carefully at these initiatives, if they are intended mainly as a way to increase girls' participation, since mothers may enter these programs only after all their children have exceeded school entry-age or dropped out of school. If this were the case, the effect would be negligible. And there may be other factors such as whether women entering these classes are not already more interested in schooling or have not become motivated to take the classes because of their daughters' schooling. At issue also is what kind of adult education class would be most supportive of education, and whether alternative approaches (for example discussion rather than literacy groups) might not be equally effective in promoting girls' education.

Providing incentives for girls to enroll and stay in school

Institutional and cost barriers have sometimes served as potently as lack of facilities in preventing children from taking advantage of public schooling. In recent years governments have become aware of these barriers and in some cases have instituted reforms to correct or compensate for them. Initiatives are of two kinds: those that remove barriers discouraging participation, and those offering material incentives for girls to go to and stay in school.

Removing age and document barriers

For years Egyptian rural children faced rigidly enforced age requirements related to schooling: a child could not enter first grade before the age of 6 or after the age of 8, and similar restrictions applied to intermediate school. To prove age, children needed a birth certificate which many did not have. Even if they possessed one, the dates were often inaccurate,

because parents commonly waited and registered two or more children at the same time. School officials now allow doctors' certificates in lieu of a birth certificate and are more willing to relax age restrictions in special cases (as they did for graduates of the UNICEF-supported community schools who wanted to enter intermediate school).

Removing promotional barriers

Research shows that children who fail exams and repeat years are more likely to drop out. Also when the average years required to produce a graduate are low, the system becomes more efficient and more opportunities become available.[8] Various systems have experimented with removing promotional exams, year by year, in selected years, or in the last year of primary when repetition due to failure on national exams creates bottlenecks. Chile regularly promotes children up to the fourth grade. Egypt[9] and El Salvador promote automatically in grades 1, 3, and 5, and after one year of repetition in grades 2 and 4. Some systems (Pakistan) allow final exams only every two years (in the second and fourth years) and a regional exam in the sixth year. In other systems, grade repetition may be prohibited. In Korea, for example, only 1 percent of children do not complete primary school within six years. Some systems (Puerto Rico and Panama) that previously had a no-repetition policy have discontinued the practice because of the poor learning that resulted (McGinn and Borden 1995). A related issue is attendance and the difficulty children who are absent often face in keeping up with their class. *Escuela Nueva* in Colombia and Guatemal use self-instrucitonal materials so that when, for example, girls are absent for menstruation, they can continue their studies at home.

Removing gender-biased policies and practices

Girls in Malawi commonly leave school at puberty or even younger to take part in initiation ceremonies into sexual adulthood. GABLE convinced initiation counselors to delay the ceremonies and to become advocates for girls' staying in school. The National Commission for Women in Malawi was instrumental in convincing the Ministry of Education to change a policy that prevented a girl from continuing in school after it was discovered that she was pregnant, while the male impregnator was not punished. Now both must drop out of school until she has had the baby, and then they both can return to school after arrangements have been made to care for the baby. Unfortunately this policy like others related to schooling in Malawi are not well communicated to local school staff and communities, and consequently the policy is not fully implemented (Malawi, GAC Unit 1997). A

[8] Other reasons that have been given for reducing repetition are that it is better for a child's self-esteem and that learning usually doesn't improve as a result of repetition (McGinn and Borden 1995: 132).

[9] Fergany et al. (1996) found, contrary to findings elsewhere, that in Egypt a school's high repetition rate had a positive effect on cognitive achievement.

study of policy implementation in Malawi describes some of the difficulties of implementing policy reform. Perhaps the most serious are difficulties in communicating the message, in resistance from various stakeholders, and in the lack of feedback that might improve their effectiveness. The study suggests that policymakers must take responsibility for implementation as well as for policymaking (Wolf et al. 1999).

Removing cost barriers

A number of initiatives aim to reduce the cost of education to parents. Kenya's program to provide uniforms and books increased enrollment, improved attendance, and significantly reduced dropout rates in experimental schools (but did not have an effect on achievement scores) (Kremer et al., in Ridker 1997: 8, 9). As already noted, Balochistan provides free textbooks to rural children. In NWFP where parents buy books, when experimental text books developed by PEDP were provided free to 800 schools, enrollments in the first year increased dramatically.

The Government of Malawi waived fees for primary education, and made uniforms optional, both of which had been major expenses for rural families. The response overwhelmed the school system, which had neither the space nor teachers to cope with so many children. Malawi's experience shows some of the unintended consequences that may attend abrupt policy changes. The "free school" policy was understood by parents to be part of Malawi's new democratization, which was interpreted to mean that everything would henceforth be free and that the government was now financially responsible for education, health, and all other services the people needed. Some villagers felt they had also been freed from customary responsibilities related to the school such as financial support for extracurricular activities, ensuring students' regular attendance, and accepting staff discipline of their children. The schools had suddenly become "people's schools."

The implementers of BRAC believe fees are a major reason poor children have not enrolled in the formal system. Its program selects poor children, especially girls (70 percent or more of enrollments), and requires no fees other than the replacement cost of materials that are damaged by children. When graduates want to move into the formal system, BRAC provides scholarships as needed to help with fees. BRAC derives its support from donors, and to a certain extent from the profits of small industries it owns. The tradeoff in providing free schooling for the poorest children is that BRAC lacks long-term funding security. It suffers also from the ambivalent feeling of the education bureaucracy that believes BRAC siphons off international assistance the formal system would otherwise be receiving. BRAC handles only about 8 percent of primary students in Bangladesh, so it still provides for only a small share of school-age children.

The high costs of "special lessons" is a major deterrent for poor children in all areas of Egypt. Though studies have shown that perhaps only half of village schools have tutoring programs, they are nonetheless a potent barrier to participation where they exist. Fergany et al. (1996) found that private tutoring (and to a lesser extent in-school tutoring) exerts no significant effect on cognitive achievement despite its considerable cost to parents. The system arose partly because teacher salaries were inadequate to support a family, and teachers consequently turned to tutoring as a means of supplementing their incomes. Male teachers tended to exploit this opportunity more, and women teachers less because they had less time to spend in after-school activities. The government tried to prohibit tutoring with little effect, and then decided to allow schools to organize tutoring in afternoon group classes in school with a set fee. The Ministry of Education claimed group learning would make tutoring more affordable, but was not true for children whose parents have difficulty sustaining any extra expenses. One of the pernicious influences of tutoring is that it creates a disincentive for teachers to teach well during class time. Some religious groups in Egypt—Islamic and Coptic—compensate by providing help for children with their homework or with money for school expenses.

Labor laws

Some countries have laws that set a minimum age and other requirements for work. These are intended to keep children in school and remove them from competing at cheaper rates in the labor market. Egypt, for example, has legislated a minimum age for work and in government-run industries has required basic literacy for employment. The effect in areas where national industries exist is to keep most children in primary school until the minimum age is reached, and then for boys to drop out and try for places in industry. In poorer neighborhoods of cities and in rural areas where work in harvesting or workshops is available, the laws are ignored.

Reducing opportunity costs

Not many initiatives specifically address the issue of the lost opportunity-costs of child labor. Some initiatives reduce the amount of time required to complete the primary level (UNICEF supported schools in Egypt and BRAC). India has set up early education classes near or in primary schools, one of the stated goals being that these programs will substitute for the child care that prevents girls from attending school. Usually, however, these centers do not take children before the ages of 2 or more, by which time the intensive care girls provide for their siblings may be over. Toddlers are often left to roam freely in villages. Probably a more significant consequence of these centers is that targeted poor children from illiterate families are brought into the orbit of the school and tend to enter and continue on into the primary program.

Bangladesh was one of the first countries to provide scholarship aid to encourage girls to continue. BRAC, for example, provided bridging scholarships for its graduates to move into the formal system. Starting in 1982, USAID and the Asia Foundation funded a program of monthly stipends for secondary girls that increased over time. The money was deposited in a bank account that could be drawn upon for school expenses. Girls had to comply with attendance standards and promise to delay their marriages. In 1992, at the end of the project, the Government of Bangladesh used World Bank financing to continue the program. Nepal initiated a similar program based on the Bangladesh model.

Most of the community school initiatives mentioned above permit parents to decide on daily timings and holidays for schools, the aim being to avoid conflicts with children's work responsibilities. For the most part, however, these formal schools adjust timings to relate to harvest needs and holidays and not specifically to when girls do their daily chores. Nonformal classes tend to be better than formal programs at adjusting daily timings to the convenience of participants (see Tietjen 1991, and Odaga and Heneveld 1995 for school scheduling).

Other small-scale efforts to reduce opportunity costs have tried to make the work of girls less time-consuming and tiring. These include drilling nearby wells, using solar energy to pump water, and piping water to homes (Yemen), and such labor-saving devices as grinding mills and milk separators (Egypt).

Discouraging early marriage

In Egypt rural girls used to marry very young, as early sometimes as 11 and 12 years of age. Marriage rules in Egypt are governed by religious law and consequently they are difficult to change. However using an administrative argument, the GOE declared that no divorce proceedings would be entertained by the courts if a marriage had occurred when the bride was below the age of 16, essentially setting that age as the lower limit. This ruling along with the growing tendency to educate girls longer has contributed to later marriages for girls.

Providing school-going incentives

Numerous material incentives have been provided to encourage children to go to school. Already mentioned are books, uniforms, and school supplies. There are also food incentives, either consumed at school during breaks or taken home (e.g., dried milk, flour, cooking oil), medical supports such as immunization and regular checkups, tax relief for parents, medical insurance (Peru), subsidized boarding and transportation, and scholarships.

Providing scholarship incentives

Scholarship programs such as those in Malawi, Bangladesh, and Nepal for secondary girls and Guatemala for primary girls, come in various combinations. Some cover such direct costs of education as fees, books and uniforms; others promise a lump-sum amount often that is held in

a bank-account that is available after a set period of regular attendance and achievement; others subsidize girls at a higher level like secondary both because their participation is low at that level and as an inducement for younger girls to complete the lower levels; and still others subsidize the establishment of small private schools.

In Pakistan, money from a combined government and donor-endowed fund supports a girls' scholarship program. A local NGO trains an educated woman in the community in how to set up a "home school" with a specified minimum number of girls to make it viable. The scholarship is tied to each girl, though the funds are given directly to the teacher to cover her salary and school materials. The teacher has an incentive to see that the girl learns and stays in school. Because schooling is essentially free and located in a local woman's home, parents feel comfortable with the arrangement. Ultimately the teacher is expected to organize and parents to support further cycles of the school. This program was established originally for poor urban girls in Balochistan, but is now extended to rural communities that cannot qualify (usually because they can only find male teachers) for the Community Support Program's girls' schools.

Guatemala has probably the most extensive and uniquely organized of the various scholarship programs. It brings together public and private sector organizations in productive relationships. In addition to scholarship programs for disadvantaged and rural indigenous girls, Guatemala provides incentives in the form of income-generating loans to mothers to set up small businesses to earn income to pay for their daughters' education.

The Guatemalan Association for Family Life Education (AGES)

The AGES NGO provides scholarships to educationally disadvantaged girls to attend primary schools. The program:

- targets never-enrolled and poor girls
- involves communities in selecting candidates and implementing the project
- uses a social promoter to facilitate program activities
- trains girls and parents in sex education and human development

The AGES project (see box) was the oldest Guatemalan initiative to provide scholarships. It was followed by small pilot efforts under the Basic Education Strengthening Training (BEST) project in Guatemala offered three incentives packages to encourage girls' education: one with community management and mentoring, the second adding scholarships to the first, and the third providing non-textbook learning materials. All three packages increased access, but had mixed results for persistence (Kane and Yoder 1998: 18). A Salvadoran women's group wanting to encourage girls' education decided to pay the costs of supplies and uniforms if daughters of the participants in their income-generating classes would send their

daughters to school. The Ugandan government, in conjunction with the private sector, offers awards to schools in the poorest districts that make improvements in girls' persistence and/or performance over the school year. The program includes components to increase community involvement and the use of trained tutors to monitor progress and offer counseling to the girls. Also, Guatemala has a larger scholarship program started in 1994 that now reaches 10 percent of girls. girls are given small stipends as an incentive to persists in school. Malawi extended its fee waiver for primary children to girls at the secondary level if they advanced through the grades without repetition. The intent was to open places at the secondary level for girls (where they had previously been selected at much lower rates than boys) and also to encourage them to continue through primary. This policy has met resistance from the parents of boys as well as from school administrators, who because of delays in receiving fees for girls, have difficulty running their schools.

Most incentives programs claim to produce increases in enrollment, attendance, and completion. Other subsidiary benefits include delayed marriage and increased employability. A number of issues have been raised about scholarships and other types of financial incentives. They include the following: 1) In most cases scholarships are similar to charity handouts benefiting single students and lacking sustained effect on student participation or needed systemic reforms. 2) The programs tend to raise the considerable objection of those not included (boys in some cases, excluded girls in others). 3) They tend to encourage fiscal abuse because of the large sums of money involved. 4) Perhaps most significantly, the costs of administering scholarship/incentive programs tend to be disproportionately high (often 50–65 percent of the total).

Providing role models

By revising teacher selection criteria, Egypt and Pakistan have encouraged the hiring of female teachers to staff rural primary schools. Though not intended for this purpose, an additional benefit has been to provide a large number of female professional role models for rural girls. Girls often say they want to become teachers because female teachers have made this seem a realizable ambition. To encourage broader ambitions for girls, Malawi's GABLE project printed a calendar that was widely distributed to schools. Each page had the picture and story of a Malawian woman who had contributed to her country. Since schools have little else to decorate their walls, these calendars stood out.

Mentoring programs

Mentoring has been suggested as a way to support girls who may have more difficulties than boys throughout their education. Mentors tend to be of three kinds: parent to child, adult to child, or peer to peer. Examples of mentoring programs include Ethiopia where girls are paired

with professional women and accompany them to work and stay in their homes to see the lives of professional women. In Ghana, girls are taken by female scientists to visit universities and scientific organizations over a two-week period each year to get a better appreciation of science and math careers. In Benin, older children visit younger children in their homes, help them with homework, and discuss problems they may have in school. In Togo, teachers are given special training to support retention and achievement through special tutoring programs with adult volunteers (AIR Project Design and Description No. 5).

Initiatives that improve the quality of schooling programs

The often cited reason for not addressing issues of quality in primary programs is that there is no international agreement on how to define quality and it is thus difficult to know what to do.[10] The indicators still commonly used to measure quality in many ministries of education include student/teacher ratios, class size, teacher qualifications, the state of school facility repair and furnishings, and other material inputs. Sometimes pass rates and promotional exam scores are added, but because they are often locally created and implemented they are not comparable across schools. Together these elements do not add up to "quality" by any reasonable definition.

Parents usually do not have difficulty deciding how to define quality[11]—they want their children to learn how to read and write, become proficient in math and sometimes foreign languages, and learn whatever it takes to pass exams that open opportunities for them. Most hope that the learning will go on in an atmosphere that is encouraging to the children and not one where there is harsh discipline or discriminatory treatment. The discussion below looks at initiatives directed at improving those aspects of the program that would meet this definition. (More on quality appears in Chapter 4).

A definition of quality

Funders may be reluctant to support quality improvements because "no agreed-upon definition of quality" exists or because "quality is too culturally bound." A useful definition can be extracted from national policy directives stating what the country expects its children to learn. With this definition improving quality would mean "to develop a system's capacity to achieve its own stated educational objectives for personal and national development."

This third category of initiatives aims (explicitly or indirectly) at attracting and keeping girls in school through better quality programs. The initiatives fall into three types: those that promote better skill development, those that make the schooling environments more

[10] Part of the confusion lies in the fact that as McGinn and Borden (1995) note, quality is used to refer to characteristics of elements that go into the education process, the aspects of the process, and the outcomes of the process (10).

[11] Do parents care about quality? In urban Lahore, Pakistan, a majority of parents from the middle and lower classes paid the costs of private education even when government schools existed nearby because they perceived the education as better quality and the students overall scored higher on achievement tests.

attractive to girls, and those that provide more relevant content for rural children, especially girls.

Maclure concludes after reviewing a number of studies conducted in Africa that learning is adversely affected by three factors: the tenuous links between family and schooling environments, a divide between traditional norms/community needs and schools' orientation to public employment, and shortcomings in the school system itself—including ineffective pedagogies, administrative weakness, and material deficiencies (1997: 8).

> Access is the most common goal of interventions, while the achievement of girls who are in school is focused on least. (Kane and Yoder 1998: 9)

Promoting skill development

Numerous studies have analyzed the factors that produce improvements in schooling outcomes.[12] Based on studies that show promise, specific inputs (such as certain kinds of teacher training) have been provided to school systems around the world under the assumption that they will produce the same results wherever they are introduced. However teaching-learning environments are too complex to isolate single or even multiple interventions that infallibly improve participation and learning, and more often than not the input fails to meet expectations. A study in Ethiopia found, for example, that reduced class size, formal pedagogical training, and female teachers showed no correlation with increased persistence or achievement (Kane and Yoder 1998: 20). Does this mean that these interventions would not work in any context? Or might they work if formulated differently and introduced into another system? This raises the question of whether in the complex context of education, any correlation between an intervention and an outcome, significant or not, can do more than "prove" success or failure in that one context. Kane and Yoder (1998) call this kind of evidence "best guesses" (22) since "most (program) interventions appear to be both 'successful' and 'unsuccessful'" (23).

Kane and Yoder (1998) report 64 interventions in the literature that were intended to increase achievement: 23 have no information on results, four had mixed outcomes, and six were not successful. Less than half (31 initiatives in nine projects) produced results. The successful interventions were alternative learning programs, single-sex schools, and the provision of textbooks. Others included curricular revisions, new pedagogical techniques, and community incentives (supplies/

[12] See W. Heneveld 1994 and B. Fuller 1986. Most elements that have correlated significantly with increases in measures of outcome have been found to do so in one or more locations but rarely everywhere. In isolation they are not usually sufficient to improve quality.

uniforms) and community management. Incentives such as scholarships may also have motivated girls to do better (where the incentive was tied to achievement) (Kane and Yoder 1997: 15).

The initiatives directed at quality reform are too many (even though fewer than "access" initiatives) to provide more than a few examples to show the range of effort.

Focusing education components on learning

Almost all national governments establish goals and objectives for their education programs. Most, however, do not connect these in any systematic way with educational inputs such as instructional materials, teacher training, teaching/learning and assessment.[13] India is one country that does. The MOE has produced a small booklet, *The Minimum Levels of Learning,* that details what children should learn at each grade and in each subject of the primary program. All education components are expected to align with these expectations, including teacher training. A similar strategy is being used for Afghan children. Afghan educators have defined "basic competencies" with examples of each specific objective for math and language arts (Dari and Pashtu) for each primary grade. These competencies allow Afghans to assess the "quality" of existing programs, create supplementary materials to fill in gaps, and standardize the various efforts of assistance agencies in providing inputs to the education program.

Improving teaching methods

The vast majority of initiatives to improve quality have been directed at helping teachers improve their teaching techniques. These initiatives are often carried out in isolation with no other improvements (such as instructional materials development or better assessment techniques), and in the majority of cases they are neither followed up to assess their impact nor do they appear to make any significant difference in learning. Even when the teaching methods are "enlightened," it may not be possible to implement them in the conditions that exist in classrooms. Sometimes they contradict the cultural basis for social interactions between older and younger people in a society that makes them even more difficult to sustain.

Maclure (1997) reports from his literature review that a number of factors in Africa undermine the effectiveness of teachers: training that bears little relation to conditions in the classroom; demoralizing living and working conditions; rigid curricula and end-of-school exams; and the absence of reading environments in these communities (1997: 9).

[13] See Rugh and Malek 1990 for a discussion on the lack of "connectedness" in the Pakistan education system.

Ridker (1997) also notes that teacher training and special methods are not likely to have an impact if teachers do not master them or the existing exam system contradicts them (18). Some other questions that have been raised in the literature are whether preservice or inservice training is more cost-effective, how to balance "theoretical" (such as child development) and "practical" training (such as materials-specific training), how to combine the right mix of "methods" and teacher subject-content knowledge, the relative merits of child-centered and direct approaches to learning, and others. Many of these issues could be resolved by comparing their learning outcomes in national contexts.

The Aga Khan Foundation has implemented initiatives in several countries to improve teacher training. In Kenya, its School Improvement Program trains teachers in a workshop setting and then provides classroom-based coaching with specially prepared instructional materials. The focus is on student-centered teaching approaches. On short-answer tests, sample and control students did well showing they were learning what they should from the curriculum as it was taught. On open-ended tests, however, there was evidence that children were not learning to read and write or apply math concepts. Their child-centered approaches did not appear to have a positive effect on learning. Assessments suggested that these poor learning results occurred because of inadequate attention to student practice and application, pressure on the teachers to prepare for exams and to instruct the children in English, the limited time devoted to instruction, and a need for more supportive supervision (Capper in Ridker 1997: 12–13).

An initiative in NWFP implemented a system of "effective practices" that had been confirmed through a study of classroom teaching practices in Pakistan to produce higher levels of student achievement. The practices—based on a systematic set of steps and a multiplicity of learning tasks—were embedded in the lesson format of new instructional materials developed for kindergarten and grades 1 and 2. Trial testing showed a high level of student achievement in classes where teachers followed the lesson plans. The experience of this initiative showed that when lessons were structured in a way that made it easy for teachers to use new interactive approaches they would do so. The activity however turned up inherent deficiencies in the teachers' learning experiences (especially their knowledge of the subject matter) that limited their ability to teach effectively (Directorate of Primary Education 1994).

In recent years, interactive learning approaches have been promoted as a means of improving learning, with mixed results. In Guatemala, the BEST project's bilingual education and interactive learning approach (patterned on *Escuela Nueva*) was reported to be successful at

increasing both access and persistence. The original *Escuela Nueva* model as used in Colombia, however, showed no significant difference in dropout between its students and conventional students (see Rojas and Castillo 1988 in Rugh and Bossert 1998: 110). Its trademark interactive learning approach was difficult to sustain in Colombia when the program was brought to scale (see Loera and McGinn 1992 in Rugh and Bossert 1998: 112). And *Escuela Nueva's* student achievement scores only differed significantly from the conventional system in some subjects and grades and the higher scores did not persist over time (Rugh and Bossert 1998: 110–12). USAID's Improving Educational Quality (IEQ) project compared the impact of a child-centered learning program, *Nueva Escuela Unitaria* (NEU) in Guatemala,with a traditional program and found that the NEU program had significantly greater impact on increasing the number of children staying in school and making progress toward completion. In general, children performed as well as students in conventional systems (Biennial Report #3 1997).

In Botswana, a study found a consistently positive correlation between female teachers who were more traditional in their pedagogical styles and higher student achievement results, concluding that "simpler and more traditional teaching styles, to which students coming from a specific cultural context can relate, may serve as well as, or better than, more sophisticated styles with no obvious association to the students' cultural context" (ABEL 1994). This was essentially the same conclusion drawn from the study of classroom teaching practices in Pakistan (see Rugh et al. 1991). If this is true, then much money may have been wasted on training teachers in sophisticated instruction methods.

IRI has been employed in video formats and through radio broadcasts to improve teaching methods of teachers. It has the advantage of conveying the intended training to teachers more accurately without the "fatigue" and "inaccuracies" that plague "cascade" forms of training. When IRI is used directly as a means of teaching children it also accurately models new teaching methods in the way lessons are presented.

Improving teacher attendance

A study in NWFP showed that students of teachers with better attendance performed better on tests (World Bank 1996). In another study in Balochistan however, although parent monitored teacher and student attendance showed higher levels of teacher attendance compared with non-monitored schools, student achievement levels were no different (Thomas n.d.).

Improving instructional materials and aids

A number of initiatives have been implemented to improve instructional

materials, but few meet the conditions that McGinn and Borden (1995) say are necessary for student learning. These conditions include covering curriculum content and objectives, matching scope, sequence, and language to student abilities, making the content interesting, making the pedagogical style consistent with that of teachers (or retraining teachers to use the new one), incorporating chances to practice what is learned, and ensuring that students have opportunities to use the materials (113). NWFP provides an example of such an initiative that will be described in more detail in Chapter 4 and in the Pakistan Annex.

One important requirement of materials in many countries is to make them suitable for instruction in multi-grade classes, and consequently to make them more easily used in self-instruction. Most textbooks now are designed for single-grade classes and are heavily teacher-dependent. IMPACT was successful at producing learning technology packages with flexible uses that included self-instruction.

Improving testing/accountability

On International Association for the Evaluation of Educational Achievement (IAEEA) tests, students of developing countries tend to achieve scores below 50 percent, while students in most developed countries score over 50 percent (see Lockheed and Verspoor 1991: 13). While these kinds of tests may not be entirely representative of what is or should be learned, it seems fair to say that children of many countries are not achieving their potential.

Testing is the easiest way to determine whether an academic program is producing the desired outcomes, yet few systems actually use test scores to assess the strengths and weaknesses of their program. Doing so would make it possible to identify more and less successful teacher training approaches, to strengthen instructional materials and to allocate supervisory and other support assistance in more cost-effective ways. In addition, testing tends to model what is expected of the schooling system. Teachers invariably teach to tests, which can be an advantage when tests are constructed carefully.

The National Education Assessment Program in Pakistan was an attempt to develop this kind of assessment capacity. Attached to the Instructional Materials Development Cell (IMDC) of NWFP, it formulated, with the help of IMDC staff, test items for third and fifth grade subject levels based on national curriculum objectives. Results were grouped by subject and grade, gender of teachers and students, school, and region.

Improving Education Quality (IEQ) project

IEQ was designed as an initiative to shift USAID's focus to quality issues by determining what children learn and how they learn it (by

documenting teaching and classroom management practices), by engaging those involved in reflection on these processes, and by providing information to inform policymakers (AIR 1999). IEQ has used assessment as a tool for improving learning in Ghana. In partnership with the University of Cape Coast and the MOE, IEQ uses curriculum-based assessment—that is, students are asked to perform tasks directly related to curriculum objectives. IEQ reports that the assessments have two benefits: they model expectations (for teachers) about what children need to learn, and they profile the skill levels of each student so the teacher can address their individual learning needs. CBA is also used as a monitoring tool to determine whether over time the performance of students improves (it has) (Biennial Report #3 1997). IEQ works in a number of other countries as well: in Guatemala to study the impact of the NEU program, in Mali to measure literacy in the national language and to study the connection between literacy assessment and the curriculum, and in South Africa to study the impact of learning-centered methodologies in the classroom, etc. These kinds of activities are especially useful because they connect inputs to the education system with learning outcomes instead of simply assuming that they happen.[14]

The Quality Management Program (QMP), Brazil

QMP started in 1995 with the aim of improving the quality and efficiency of primary education and especially reducing repetition and dropout. The program is based on the following principles:

- School management is based on the principles of total quality management (TQM).
- All school elements focus on promoting student learning.
- The community develops a school development plan (SDP) to define goals, strategies, targets, plans, and responsibilities.
- Monitoring, visits, and awareness produce lower dropout.
- TQM results in better school organization, decentralization of decisionmaking, and more accountability to the community.

(Alvana Maria Bof 1998)

Improving supervision

Supervision systems in many countries are legacies of colonial inspection teams, with supervisors' judgments superseding more objective assessments of quality. Supervisors tend to see themselves as officials who check school inventories and attendance records, and in classrooms they may monitor whether teachers have completed a requisite number of textbook pages according to a stated schedule. Most initiatives to improve supervision have sought to make supervisors more supportive of teachers in improving the quality of teaching. Some of these initiatives require them to present model teaching lessons, to check off teacher behaviors learned in training, or to hold training sessions (often using

[14] The next steps, of course, are the critical ones: to ensure that the insights get translated into learning improvements.

cascade methods to communicate centrally-inspired messages to the field). Other initiatives concentrate on alleviating supervisors' chronic transport difficulties by providing cars, motorcycles, or allowances for travel to schools.

Before it scaled up, *Escuela Nueva* implemented a system whereby supervisors and teachers (who had elected to join the program) gathered periodically to develop materials and talk over their programs. In interim periods, supervisors visited teachers in their classrooms. When the program expanded, this intense involvement of supervisors and teachers could not be sustained, and many teachers simply went back to using traditional teaching methods. Egypt's community schools had a similarly intense involvement of teachers and facilitators, which also became difficult and expensive to replicate, thus slowing expansion. A core component of the Community Support Program in Balochistan was asking teacher trainers and NGO facilitators (acting as supervisors) to visit teachers and support their classroom teaching. On the one hand this system worked well, probably because the "supervisors" acted more like mentors, but ultimately the schools came under the public system and the more inspector-like supervisors took over periodic visits.

Supervision systems have proved difficult to reform. In many countries there is no choice but to give supervisors a meaningful role in reform. Some have suggested that school principals be held accountable for results, and that the supervision system be disbanded altogether, but many schools are not large enough nor school systems rich enough to put principals at the head of every school, and supervisors constitute a strong constituency that would be opposed to such a suggestion.

Improving management

Several initiatives have targeted the reform of management, in particular, efforts to institute more rational institutional structures for the provision of services. They include programs to bifurcate the offices of primary from higher stages of education in order that resources and efforts become clearly separated and traceable, to decentralize decision-making to regional and local offices in order to improve efficiencies in service, streamline other institutional processes, procedures and programs, develop the capabilities of bureaucrats to manage more effectively, and provide them with the tools (e.g., educational management information systems, policy planning units, and other specialized technical structures) to do a better job. Efforts at all these kinds of reforms have been present in Egypt and Pakistan. In both countries, most of these reforms have been flawed, either because the planning tools were not effectively used or because authority and responsibility did not devolve to branch offices sufficiently to make a significant impact on services.

Reforming the program as a whole

While many initiatives aim at improving one component of quality (such as teacher training or assessment), few address the academic program as a whole. There are however a few examples of fairly comprehensive reform. These include BRAC, IMPACT, *Escuela Nueva*, and community schools in Malawi, Mali (STC), and Egypt. Inevitably, however, when children in these schools are tested they prove to be slightly better or equal to normal government schools but still well below mastery. BRAC has acknowledged this problem and has made it a priority to improve learning. The PEDP in NWFP also mounted a full-scale reform of program quality (described in the Pakistan case study in the annex) that looked promising in the 800 schools where it was implemented, but the abrupt cutoff of the program meant there was not time to compare experimental with normal schools.[15]

Alternative programs

A number of private schools have shown that with lower budgets they can outperform higher cost government schools, e.g., Egypt and Pakistan. Some reasons for why this may be true are that:

- the schools must attract and keep their client base, and therefore principals and teachers are more motivated and willing to be accountable for results;
- teaching is focused more clearly on the learning outcomes clients value;
- staff work on contract and can be fired for poor performance or excessive absence;
- there is more choice in instructional materials and teaching style; and
- problems are usually dealt with quickly.

In these two countries, class size in private schools often exceeds that of public schools and other conditions may not be significantly better—yet they still produce better results. In Pakistan, schools run by the military (and therefore a form of public school) also produce better learning outcomes than normal public schools. Personnel of those schools believe the better results are due to the greater discipline in the school and the emphasis on learning results.

Bringing to scale

One criticism of initiatives directed at comprehensive program reform has been that they have remained experimental, limited to a few schools (Malawi, IMPACT in the Philippines, Egypt's community schools),

[15] Tests measured children's performance against "mastery" standards. In all but a few classes the majority of children achieved above 70 percent.

or that when they scale up they lose the essence of what improved them (*Escuela Nueva*—see McGinn 1996). The reason some of these initiatives have not been widely expanded is the governments' lack of interest in making the necessary administrative changes to accommodate the program; the higher costs and/or greater efforts required; resistance from competing units of the bureaucracy; and lack of political will (see Rugh and Bossert 1998). Often they are initiated by charismatic leaders, who cannot be easily replicated.

The programs that lose their essence in bringing them to scale are those that have not sufficiently worked out how to translate their essential elements during replication, and shortcuts may have been taken that compromised results. For example, *Escuela Nueva's* unique involvement of teachers in the development of materials cost too much when many teachers were included; thus the program began mass-producing existing materials for newly involved schools. In the pilot stage, teachers volunteered to participate and were therefore highly motivated to carry out its design. In scaling up, teachers were simply assigned to take part, and consequently were less motivated. *Escuela Nueva* also depended heavily on teachers acting as agents of change in school-community relations. The less motivated teachers were not willing to spend their after-school hours in these activities. BRAC, on the other hand, recognized this problem early and did not assign teachers significant activities after work. It also focused on teacher support that was brought to the classroom.

These few examples show that initiatives to improve quality have proved disappointing in many cases. This was often because there was not a clear vision of what the initiative intended to do, or because the effort was piecemeal and did not address all the elements that were critical to success, or because innovations were simply assumed to produce better results without any clear evidence that they would or had.

Making schooling environments more attractive to girls

Some of the initiatives already described that motivate parents to send their daughters to school also encourage girls to want to stay in school: these include involving communities in changing norms about girls' education, removing such disincentives as special costs or policies that discourage participation, and providing incentives such as scholarships, free books, or uniforms. Most initiatives that established schools or improved facilities also made special provision for toilets and sanitary facilities because of the importance of this factor for girls.

In addition, there are three other kinds of initiatives that make schooling environments attractive for girls, including providing appropriate facilities and staffing, making the schooling environment more girl-

***Nueva Escuela Unitaria* (one-room schools)**

Between 1992 and 1997 NEU was implemented first in 100 schools and then expanded to 200 schools in remote rural areas. The strategy included teacher training, materials design and development, flexible promotion, an evaluation system, and redesigned furniture to create a new learning environment and improve quality. Concern for equity was a cross-cutting principle implemented through sensitivity training and feedback on girls' issues, and methodologies such as cooperative learning, peer instruction, and student government (where each child is given a leadership role). Results showed that an education initiative with a girls' focus has an impact both on absolute numbers enrolled and in a reduction in the gender gap. Girls' enrollments tripled and boys' enrollments doubled in the final year of primary schooling, and the NEU schools surpassed conventional schools for both. (Núñez and Rubio 2000)

friendly, and providing convenient alternatives to formal schooling.

Providing appropriate facilities and staffing

A number of initiatives attempted to make schooling congenial to girls through appropriate facilities and staffing. In some conservative areas, parents will only enroll their daughters in single-sex schools with female teachers. The Human Resource Surveys of Balochistan and NWFP showed that even though a substantial group of parents were willing to accept coeducation until about grade 3 (even when taught by male teachers if they were local men and known to the community), a significant number were still unwilling to accept these options. Therefore, The Society, an NGO formed to implement the Community Support Project, was contracted to establish girls' schools in these conservative regions of Balochistan. Doing so required communities to find local females with at least a minimum eighth grade education who were willing to teach. CSP upgraded the qualifications of these local women through intensive training and follow-up support. The presence of female teachers made it possible for many girls to go to school (rates of participation in villages were significantly higher than non-CSP villages) and the teachers served as role models for girls who might not otherwise have seen professional working women. Parents elsewhere in Pakistan report that they also prefer to send their sons to female teachers in the early grades, because they believe female teachers are more sympathetic instructors and less likely to impose harsh discipline.

In Botswana, a consistent positive relationship was found between a school environment with a higher proportion of female teachers and gains in girls' achievement levels, and that this happens without disadvantaging male students. This study also found (surprisingly) that at the junior high level there was no relationship between girls' performance and their dropout rates (ABEL 1994).

Schoolyard walls are seen by parents and education officials as essential security elements in girls' schools in Pakistan, and parents may refuse to send girls to a school without walls where they may be seen by passing men. When USAID-supported construction in NWFP and Balochistan

did not provide customary boundary walls (the cost was sometimes as much as for construction of a whole school), communities either raised the money themselves or developed less costly alternatives such as mats or dense hedges. Similarly small donor initiatives in Pakistan have improved latrines in existing schools to encourage a greater participation of girls.

Gender quotas

Several programs (BRAC, Mali, UNICEF-supported community schools in Egypt, and others) have gender quotas requiring intakes of 50–70 percent girls. When girls make up at least half of the student body, the atmosphere is usually more comfortable to them than when they are a minority in boy-focused classrooms. In several countries (e.g., Malawi) efforts have been mounted to change policy to provide single-sex classes for girls in subjects such as math where their performance has traditionally been poorer than boys. Resistance to such policies tend to be related to the difficulty of finding sufficient teachers and classrooms to make such changes.

Encouraging female teachers to teach in rural areas

Balochistan and NWFP have tried other measures to encourage qualified women to teach in "far-flung" areas, including special bonuses, free housing attached to schools, allowing male relatives to stay with the women, hostels in central locations so several teachers can live together, and free transportation to rural areas. The special living arrangements have not been very successful—most are either empty or used for other purposes (Warwick et al. 1989).

NWFP revised selection policies for teacher training colleges from a strictly merit-based to a quota-based system with preference for rural females, and substantially expanded the physical capacity to train the added numbers of women (in separate training facilities). NWFP also now assigns teachers to schools within the administrative unit where they live to encourage better attendance.[16] Egypt had a similar experience, starting in the 1980s, of expanding the number of rural female teachers for (coed) primary schools through a quota system in training colleges. Now rural schools have a significant number of female teachers.

Learning in a local language

Girls are said to be especially disadvantaged in the early years when they have to learn in a language unfamiliar to them. Several countries (Guatemala, Mali, Malawi, Peru, Pakistan) have either begun or are preparing to begin to teach in local languages in the early grades. Previously instruction had been in a foreign language (Mali) or a

[16] Interestingly, district education officers often do not like this system because it weakens their control over the teacher who, with the backing of the village, can exert strong pressure to continue in the same school.

dominant national language (Malawi, Pakistan). Proponents say research has shown that early learning is easier and more successful when instruction is in the mother tongue, and that switching to another language later can also be easier after a child has already learned to read and write in one language. Critics say that where many languages are spoken locally, some children will still be disadvantaged by having to learn a language unknown to them, that it is costly to translate instructional materials into several languages, that because of their different structures, each language requires a different approach, and that there are few (or no) reading materials available in local languages. It may not always be possible to find the right mix of teachers for the languages, and even those who know the languages may not know how to read and write them well enough to teach. Or they may not be adquately trained to teach two languages, and thus children do not learn either language well. Perhaps the strongest criticism is that local languages have little utility for children who have to know the national language to find jobs or to communicate in educated circles. If the national language is taught only in upper grades, critics say, children do not learn the languages as well. They conclude that the problem lies more in the way that non-local languages are taught (as first rather than second languages) than in a need to change the language.

Creating more gender-balanced environment

A number of initiatives have been undertaken to render schooling environments more gender-balanced. Malawi's is perhaps the most comprehensive because of the way it addresses gender issues from several vantage points (already mentioned are the GABLE social mobilization campaign, fee waivers, scholarship programs, radio programs, role model calendars, and instructional language and pregnancy policy changes). Malawi has created a Gender Appropriate Curriculum (GAC) Unit as part of the Ministry of Education with the responsibility of reviewing curriculum materials for gender-balance. Now with the revision of the materials, Malawi has a gender-balanced curriculum for classes 1–8 for all subjects. In the meantime the GAC Unit began conducting gender-sensitivity training to make the learning experience more attractive to girls. The GAC Unit first developed a resource manual and a six-module training course for teachers, principals, and supervisors covering issues of gender bias in community-school relations, curriculum and instructional materials, teacher-student interactions, scheduling and use of school space, sexual issues, and school chores and activities. The GAC Unit provided training and followed up with observational studies to measure impact in classrooms. It also extended its gender-sensitivity training to illustrators, testing/assessment developers, and curriculum writers. To give gender-sensitivity issues institutional sustainability, the GAC Unit

staff worked with the developers of training programs to incorporate their materials into the standard preservice course where they have become an integral part of teacher training. The GAC Unit continues to review textbooks for gender-balance and circulates checklists for gender-balance in schools and classrooms.

Other initiatives that are sensitive to gender-balance have included ensuring equitable provision of textbooks to boys and girls and making sure that school-related chores are equitably shared and that time consumed by the chores is limited. Many of these initiatives seem small and insignificant, but over time they send messages about the equal importance of girls' education.

Critics of gender-sensitivity interventions say they tend to be underfunded and relegated to remote parts of the bureaucracy where staff may be asked to take on ad hoc activities that do not measurably contribute to the issues that are their concern. They depend to a considerable extent on the motivation and sensitivity of their staff who have to be able to extract from the socio-cultural context those behaviors and practices amenable to change that may be negatively affecting girls. Even in Malawi where the program has been effective, the GAC Unit is often viewed as an add-on (with unstable funding) and as an irritation by some curriculum developers who do not like to have their materials reviewed. The GAC Unit consequently tries to institutionalize its functions in school books and in teacher training curricula and materials.

In Colombia and Guatemala, *Escuela Nueva* offers a package that is considered to have a number of girl-friendly elements. These include child-centered, participatory, cooperative, and "comprehensive" learning environments. Comprehensive means that attention is paid to curriculum development, the learning gprocess, community involvemnt, and participation in a democratic context. In school, children are involved in peer and group learning, self-instruction, and student governemnt where they have equal opportunities to assume various roles and responsibilities. Studies have shown that these approahes increase the self-esteem of both boys and girls and that both demonstrate significantly more "democratic" behavior in countries shwhere this approach is uesd (Colbert 2000).

Offering second-chance primary programs

Kane and Yoder (1998) suggest that alternative, often nonformal, programs may prove successful at enrolling and keeping girls because they are small-scale, function outside the education system and are run by motivated NGOs, and their outcomes may be more easily controlled and measured (18).

Indonesia (Program for Out-of-School Youth) offers classes on weekday evenings and weekends so that out-of-school youth can complete primary schooling and become eligible for the secondary level. Students use teaching-learning packages that let them work at their own pace. Costs are met through community donations and fees. New Zealand (Second Chance for Maori Dropouts) offers Maori dropouts a program that provides skills in the context of Maori culture and heritage. The Philippine's IMPACT program, designed in the 1970s as a cost-effective alternative primary program (considered alternative because of its module-based, self-learning system), permitted children who had left the system to return and resume at the level where they had left off. Nepal (Naulo Bihana) provides a nine-month program equivalent to three years of primary for 8 to 14-year-old out-of-school children (AIR, Project Design No. 6). Afghan children can take an accelerated 18-month program equivalent to three years of primary, and BRAC also offers an accelerated program for older children that is equivalent to the primary level. Other programs such as that offered by Qadi Azim University in Pakistan offer outreach programs for women to complete primary equivalency.

Providing more relevant content for rural children

It was mentioned earlier that academic programs rarely include life-skills information that might support improvements in important development indicators. When such material is included it tends to be out of date, overly technical, or not interesting enough or practical for use in a particular environment. Although the information is important to both boys and girls, it is more crucial for girls because of their important role in household work and family health and wellbeing. Often girls find the topics interesting because they are useful. Programs that do not include such topics may be criticized for not balancing the interests and needs of boys and girls.

Life-skills materials

Initiatives to develop life-skills materials are fairly new. The three examples[17] here show some of the variation (and evolution) in the way the materials have been presented. In Egypt the New Horizons Program for out-of-school girls consists of 100 lesson plans on topics ranging from child rights, self esteem, nutrition, hygiene, and first aid to childcare, reproductive health, childbirth, and female genital mutilation. The lesson plans and background information are collected in a facilitators' manual and are accompanied by posters and cassettes that illustrate the lessons. A discussion or role-playing format is used, and the information and resource materials are kept up-to-date by the

[17] Zambia's Program for the Advancement of Girls' Education (PAGE) is a broad initiative to promote the education of girls. Its activities also include the development and production of learning materials to support life skills and gender sensitivity.

developers. The course is suitable for presentation by a minimally literate facilitator.

Fieldworkers representing NGOs working in rural areas of Egypt wrote the materials under the supervision of two technical assistance experts. They prepared the lessons in formats that would be interesting to rural girls, and once having completed them provided the market for their use. Writing workshops were preceded by needs assessment surveys and succeeded by trials of the materials in the NGOs' villages, both conducted by the fieldworker participants. When brought to scale[18] the program proved very popular: it brought low status village girls together to form a peer-support group, gave them information that others did not know but wanted to know, made them interested in entering literacy and other self-improvement classes, and, according to participants' own reports, changed some of their health and other practices.

The second initiative in Mali was similar, but was directed at primary school students. A brief needs assessment was conducted in a sample of villages with the help of community-school facilitators, and a list of topics was drawn up similar to those in Egypt. This time the lessons were developed in a format that would appeal to school-children. Simple reading passages were written with a set of constant village characters, including a young girl who, because of what she had learned at school, was able to solve problems in the village. For young children, the teacher could read the passages and use the accompanying posters to communicate the messages. Older children could read the passages themselves and answer the assessment questions. These materials were written in a workshop composed of ministry officials and NGO facilitators to combine the talents of educators and fieldworkers who knew the audience and context. Although intended originally as supplementary materials, the ministry has since decided to incorporate the lessons into a revised curriculum.

The third initiative integrates life-skills materials in the schooling program in an even more productive way. This is an instructional program now being developed by Afghans for Afghan children. The participants have developed specific math and language arts competencies for children at each grade of the primary level. The life-skills materials in this case will serve as the content (along with other subject content) for lessons designed to develop academic skill competencies. The materials are intended to serve several purposes: to be simple and self-evident tools for teaching, to achieve specific skill objectives, to provide important and relevant program content, and to provide a format that is not only attractive to children but can be used

[18] Over 10 thousand girls have taken the course.

Initiatives to increase the resources available for education

in the older grades in self-instruction. The conditions of Afghanistan require this kind of flexible use, as well as attention to making each element of the instructional program bear multiple functions.

The initiatives to increase the resources available for education are of three kinds: those that encourage outright budget increases (ministry of education and donors/lenders), those that encourage cost efficiencies, and those that leverage resources from outside the education sector.

Encouraging outright budget increases

Initiatives to expand the actual resources available have been tried in several countries. For example, USAID and other donors frequently make it a condition of their support that governments increase the share of the national budget devoted to education, and of that to increase the portion spent on primary education. This is intended to ensure that a donor's support does not replace—but rather supplements—local money, and also that the country demonstrates its budgetary commitment to education.

Encouraging cost efficiencies

The matter of resource utilization is critical in the provision of opportunities for girls, since how resources are used determines how many opportunities can ultimately be made available to them. In Egypt, there are roughly two teachers in the system for every classroom of students, and yet only one teacher teaches a class. Since the recurrent costs of teachers' salaries make up a large share of the education budget, there appears to be a considerable oversupply of teachers. Costly construction, as already noted, allocates large amounts of funding to a small set of clients and puts off the day when other clients receive benefits. Most USAID support for construction in Egypt and Pakistan was targeted to rural communities where costs were cut by requiring the community to contribute land for new school construction. A major problem that remained for governments to resolve was how to acquire land in urban areas, where the pressures of population growth in some areas had created appalling conditions in schools. Urban land in both countries is expensive and difficult to find, and communities cannot be asked to bear the cost of purchasing it. Pakistan cut the costs of construction by officially opening boys' schools to girls in rural villages and by utilizing mosques as venues for basic primary study. Yet in that country, "shelterless" (rented facilities) schools, as noted above, were considered a liability to be replaced with construction as soon as possible. Other countries have, as also noted, worked out promising cost-sharing arrangements with communities. Still, not enough has been done to find alternatives to costly construction.

A different problem arises in remote villages where small numbers of children are not deemed sufficient to construct a school and settlements are too far apart for consolidated schools. The rigidities of governments make it impossible to provide a program when no school building is present. Few governments actually analyze these problems and come up with cost-effective remedies. Consequently, remote communities and poor neighborhoods where land is not available tend to be at the bottom of lists for providing schooling opportunities.

Dropout and repetition represent another form of resource wastage that is often not effectively addressed. When children occupy places for a period of time and drop out before attaining optimal skill levels, or repeat grades (and swell class sizes and place additional burdens on teachers), opportunities are being denied to others. Social promotion has not proved successful in terms of attaining expected learning. Girls may be particularly vulnerable to these forms of wastage when parents withdraw them more quickly at the first sign of poor performance. Few systems provide effective remedial help or opportunities for children to reenter the system. One USAID document notes that, "If the quality of education is enhanced, fewer students repeat: this releases additional school places for new students without having to build new classrooms...and, indirectly, improve(s) access" (USAID 1992).

Part of this failure to allocate resources more cost-effectively lies in four factors: the weakness of planning units to derive and implement cost-effective policy solutions from their now often-improved management information systems, a lack of capacity to experiment in limited trials with various options, the absence of effective monitoring systems, and inadequate capacity to analyze and improve on results.

Leveraging resources from outside the education sector

Resources useful in realizing education objectives include, besides financial assistance and other kinds of material support, non-material support such as advocacy for girls' issues, time and effort spent in organizing and managing activities directed at reform, and labor and other in-kind donations. There are basically four kinds of initiatives where resources come from outside the education sector: community-based, cost-sharing initiatives, usually facilitated by NGOs (already discussed above and not discussed further here); initiatives supported by other public sector entities; initiatives supported by private organizations; and initiatives encouraging outright contributions from the public sector. Space allows for only a few examples. For a more complete review of these initiatives see Tietjen 2000.

Leveraging resources from other public sector entities

India exemplifies the kinds of leveraged support for the education sector that can be obtained from other public sector agencies. The

Ministry of Social Affairs sets up early childhood centers to encourage disadvantaged children to take advantage of health and nutritional programs and ultimately to enter primary school. In Latin America, Egypt, and Pakistan, ministries of health support school systems with inoculations and medical, dental, and other programs for children as well as sometimes for their parents.

Leveraging resources from private organizations

Resources for education have also been leveraged in various ways from private organizations, with varying implications for public sector control. The efforts include those that are paid for and managed independently by private sector organizations, those that use some public money but are organized by private groups, and those that provide private resources for public schools.

Private efforts

The poor facilities and poor program quality of public schooling in many countries has prompted profit and nonprofit groups to organize alternatives for parents wanting better opportunities for their children. Countries with a variety of alternatives include India, Pakistan, and Egypt. India has over 100 thousand NGOs devoting attention to education. They include welfare and community associations, voluntary agencies, retired persons groups, charitable groups, and religious societies. The NGOs provide a variety of services from setting up libraries and tutoring centers, day care and early childhood programs, literacy programs, and nonformal substitutes for primary schooling, to full-scale networks of private primary schools, community libraries, tutoring centers, and large-scale literacy programs.

Pakistan has similar efforts mounted by private individuals wanting to contribute to their home villages, charitable groups providing alternatives for disadvantaged children, kindergartens, outreach programs organized by local universities, religiously sponsored schools, and conventional, for-profit private schools. Egypt has for-profit daycare/early childhood, kindergarten, and full primary programs, as well as low-cost or free religiously organized schools and education support services such as transport to school, health, assistance with school expenses, and tutoring centers.

Private schooling opportunities in Pakistan and India come in enough variety to make some affordable (if not always available) to parents in all income brackets (see Lahore example in Chapter 2). The advantage of working outside the system to those offering schooling to specific groups (including the poor, girls, nomadic groups, lower castes, children of construction workers, etc.) is that they can target their programs to the conditions and needs of the children in question. In some countries a substantial portion of primary age children join privately sponsored

schools. Critics of these schools complain that some offer poor quality programs for the fees they ask. And to counter the most egregious abuses, many governments retain control over the licensing of alternative schooling programs, in some cases mandating the curricula that must be taught.[19] These regulations can hinder rather than help schools trying to improve on government programs (e.g., BRAC in Bangladesh and UNICEF-supported schools in Egypt), forcing them to adopt methods and content from the public system they would rather avoid so their children can pass essential exams. In general alternative programs are beneficial for the education system as a whole by accommodating more children, including some of the most difficult to reach, and sometimes providing improvements in the quality of learning. Resources for education are expanded with little or no additional effort from the public education sector.

Public support and private control

Latin America offers an example of a multi-national effort that stretches MOE budgets. *Fe y Alegría*, a church-sponsored program with over 500 schools and more than a half million students in 12 countries of Latin America, manages and promotes a quality school system targeted at disadvantaged communities. The government provides teacher salaries while the rest of its support comes from school contributions, private donations, fundraising drives, parents' associations, and donors. *Fe y Alegría* has negotiated a fairly autonomous status that allows it to open new schools, select school principals, provide teacher training, and even develop instructional materials for its own students. At times it has also provided training for teachers in the government system (Swope 1999).

Leveraging resources for the public sector from private sources

A number of initiatives have leveraged private resources in support of public schooling. Egypt has laws, for example, that allow a tax break of up to 3 percent of a private company's profits if donated to charity. Some believe it may be possible to extend this deduction in support of education initiatives. The Association of Coffee Growers in Guatemala has established a fund for improving rural schools and educating children, especially girls. The MOE in that country is channeling funds for girls' scholarships through this association. In the Central African Republic, the Tupperware Corporation, as part of the Give a Child a Chance Program, helps families pay for a girl's education. The Wafa Bank in Morocco promotes the One Agency/One School Project by asking each branch of the Bank to provide financial, organizational, and managerial support for a local school.

[19] Governments (as in Egypt) may also have rules about either the diplomas that must be acquired or the exams passed for entrance into higher stages of the formal system (including university) or it may restrict entrance into government employment to those with public school degrees.

Strategies for Advancing Girls' Education (SAGE) project

SAGE provides a program of technical services in support of girls' education. Its objectives are to:

- strengthen public and private sector institutions to promote girls' education;
- increase knowledge of girls' education to better implement related policies, strategies and programs;
- mobilize leadership to promote girls' education; and
- broaden and support local community participation.

Leveraging the support of advocacy groups

Another strong source of support in several countries has been women's advocacy groups. One that has been important in promoting girls' education in Africa is the Forum for African Women Educationalists (FAWE), which advocates for girls by sponsoring seminars and training, and by establishing girls' clubs (Ghana). Another group, Female Education in Mathematics and Science in Africa (FEMSA), has developed profiles on girls' participation in science and math in four African countries to better inform the teaching of these subjects for girls. The Women's Forum in Guatemala has been a strong supporter of national policies that make girls' education a key policy. In Malawi, women's associations pushed for revision of the pregnancy policy that forced girls to leave schools. While ministries of education may count girls' education as only one of many issues they deal with, women's organizations usually see it as a priority and one that they will continue to support aggressively.

The USAID-supported Girls' and Women's Education Activity (GWE) and Strategies for Advancing Girls' Education (SAGE) project support multinational efforts to gather stakeholders of countries from public and private sectors to coordinate efforts on behalf of girls' education and to leverage local resources, both human and financial, for low-cost girls' education interventions. The aim is to expand current activities in ways that reduce the barriers and encourage girls' enrollment and completion of the primary level. Part of these efforts are to review worldwide initiatives already undertaken and to distill from them the experiences and lessons learned in order to launch more productive efforts in the future. These two initiatives have published the latest information on girls' education and regularly hold conferences to communicate it to policymakers and practitioners in the field.

Conclusions

A variety of initiatives have been undertaken in developing countries to encourage girls' schooling and to remove constraints preventing their full participation. On the supply side, the majority of the initiatives have expanded opportunities by building standard schools or through such cost-effective alternatives as less expensive schooling models, cost-

sharing with parents, expanding existing capacity, flexible delivery systems, or providing other essential physical components to education (materials, instructional aids, furnishings, etc.). To encourage demand, initiatives have been undertaken that mobilize community interest in girls' education, reduce costs to parents, and provide incentives to attract girls to school and keep them there longer. Also to encourage demand are initiatives to make schooling more attractive to girls by providing better quality programs, more gender-sensitive schooling environments and recently, more relevant course content. Finally, other initiatives have endeavored to increase the resources available to primary education through increasing the share of national and education budgets devoted to primary education by effecting cost efficiencies and leveraging resources from other sectors.

Key conclusions

- Most initiatives to increase girls' primary participation fall into four categories, those that: expand the supply of schooling opportunities, mobilize support or provide incentives for girls' education, improve the quality of schooling programs, and increase the resources available for girls' education.
- By arraying descriptions of existing initiatives against identified constraints, practitioners can develop a matrix of potential actions for solving specific girls' education problems.
- Supply-side initiatives have expanded opportunities by building standard schools or seeking cost-effective alternatives such as less expensive schooling models, cost-sharing with parents, expanding existing capacity, creating flexible delivery systems, or providing other essential physical components to education (e.g., materials, instructional aids, furnishings).
- Physical and material inputs intended to expand opportunities have had variable results. Construction can have an impact where schools did not exist before and where buildings are considered a prerequisite for starting programs. Buildings, however, do not necessarily improve academic performance, nor are they the best use of limited education resources.

- Provision of textbooks can have affect both learning and en-rollment where few books existed before or were too costly to parents. Teacher training programs rarely achieve the quality results intended but may be mounted under the rationale that such programs increase the number of qualified teachers.
- Demand for education has been encouraged with initiatives that mobilize community interest in girls' education, reduce costs to parents, and provide incentives to attract girls to school and keep them there longer. Initiatives have also attempted to make schooling more attractive to girls by providing better quality programs, more gender-sensitive schooling environments, and more relevant course content.
- Another way to expand girls' education is to increase available resources through increasing national and education budgets devoted to primary education, effecting cost-efficiencies, and leveraging resources from private and public sectors.
- Accessibility, program effectiveness, local relevance, and general school attractiveness are all key factors in shaping a positive attitude toward schooling.

4. Basic strategies and implementation models

Introduction

John Gillies, AED

This chapter presents basic strategies to retain girls (or, for that matter, boys) to the end of the primary level. The introductory chapter stated that an important reason for investing in girls' education was to improve a nation's economic and social indicators. It also suggested that this larger goal might be advanced by focusing on four related objectives: retaining girls until they complete (at a minimum) the end of the primary level, ensuring their attainment of basic literacy and numeracy skills, providing "indicator-relevant" program content to improve the developmental impact of schooling, and supporting the transition of girls to higher stages of education. It suggested also that an education ensuring greater private returns to girls and their parents might make them willing to invest further resources of time, effort, and money in extending girls' educational participation. In addition, better quality programs might also compensate for poor children's background conditions (where girls' disadvantage often intensifies) by expanding their skills and, consequently, the opportunities available to them.

The previous two chapters discussed the issues related to girls' retention and the initiatives that have been taken in various countries to address them. ***This chapter extracts what is relevant from these experiences and integrates it into strategies with potential for contributing most substantially to the objectives above. The aim is to achieve more of the desired outcomes (access, persistence, and quality) for girls through more efficient and better use of resources.***[1] This chapter ends by describing how an enhanced program for girls might be implemented. It suggests two models: one generic to any reform activity that aims to produce results, and the other a cost-effective organizational format for developing and delivering more and better education services.

Attaining the objectives

This paper so far has stressed issues and initiatives that affect girls' schooling experience at the grassroots level. Before synthesizing the findings of the last two chapters, it is important to discuss two factors that are given considerable weight in reform: political will and policy dialogue. This discussion is meant to highlight their importance and to suggest ways to "broaden" the dialogue, while cautioning against unrealistic expectations for their impact as sole or even significant interventions on behalf of girls' education.

Political will and policy dialogue

Significant education reform rarely occurs without political will. The earlier example of Oman's determination to provide schools for all the country's children illustrates how quickly significant changes can occur.

[1] Because this is an analytical synthesis of promising initiatives, there are few citations. For more on specific initiatives, see the previous chapter and the case studies in the annexes.

That case is, of course, a special one, since it describes a sustained and omnipotent political will in a country where rulers change infrequently.

The impact of political will is frequently limited by the fact that officials with enough authority to effect changes have limited tenure, and when they leave office their policy reforms may be reversed overnight (and often are, as a matter of principle). With little independent legislative power and lacking the mechanisms to institutionalize change, policy-makers may be unable to make more than "personal agreements," even when they appear to carry the weight of binding national documents.

Bureaucracies may also be driven by aggregations of contradictory rules that have never been systematically analyzed or rationalized. Then when new rules are added through reform, their implementation may be stymied by a host of other rules that cannot be changed. For example, changes in civil service rules (often crucial to education reform) affect multiple sectors and multiple power bases and therefore cannot change unilaterally. Budget changes are resisted when they require another sector or another unit of the same sector to give up resources.

Even when reforms are agreed upon, changes may not be communicated throughout the organization or may simply not be implemented by the bureaucrats who control everyday administration. Their resistance can be hidden in a welter of administrative detail that makes it difficult to identify the source of the problem. Bureaucracies in many developing countries are highly personalized and difficult to reform and/or to sustain reform when personnel change.

To be fair, the area of policy reform and dialogue is sensitive, because it concerns national sovereignty. Many governments have been disappointed with the limited results of donor-funded projects, either because they were not properly implemented or were not a good idea in the first place. They may feel they know more about what needs to change than do donors, and are no longer willing to be "partners" in reform. Even though framed euphemistically as "dialogue," policy discussion often takes place in a context of unequal advantage. The imposition of conditionalities (while often necessary) furthers the sense that reform is involuntary. On the other hand, those with previous experience may know that unmet conditionalities rarely elicit sanctions. Or sometimes conditionalities trivialize policy reform by linking resources to insignificant activities chosen because they are easy to accomplish or measure. Past experience and inconsistencies in the way the process is carried out often undermine the reform outcomes.

An example illustrates how a policy reform can go awry. The PED Program had as a major conditionality for disbursement of funds that the ratio of girls' to boys' schools constructed should be 3 to 2. Altogeth-

er 2,100 new girls' schools were built "a 70 percent increase in less than five years." However, in the end only 16 percent of the construction was for girls' schools in Balochistan and 40 percent in NWFP, which declared that all their single-sex schools would henceforth be "gender-less." According to an assessment document, the government used the policy change to claim "freedom from any donor requirements for gender equity in construction." In the end "the bulk of the resources [were] dedicated to boys' schools" (Benoliel et al. 1997).

What can be done? In some cases it may be appropriate to broaden the concept of policy dialogue to incorporate the idea of experimenting with reform before instituting broad changes. For example, it may be more acceptable to local governments to work with partners to prepare supplementary materials to fill gaps in school programs rather than change curricula, develop trial materials rather than change textbooks, test and strengthen teacher content knowledge rather than change preservice training, develop and test more appropriate assessment instruments rather than reform the national exam system, and experiment with limited decentralization rather than effect a change in authority overnight. While political will is also needed, this policy dialogue can have the advantage of involving bureaucrats at all levels in experiencing reform and the way it works before committing to major changes. This kind of dialogue starts with the premise that no one has the answers but that by working together it is possible to find solutions. By the end of this process the effectiveness of various policy options becomes more apparent and those involved have a greater stake in advocating for viable solutions. This experiential as opposed to theoretical dialogue leads more naturally to sustainable reform based on iterative routine instead of "paper objectives."

Four basic strategies

Accessibility, program effectiveness, local relevance, and general school attractiveness are key factors in shaping the attitudes of parents and their daughters toward the schooling program. The strategies described below therefore are designed to:

1) provide cost-effective schooling opportunities to as broad a spectrum of the population as possible;
2) provide an academic program that ensures the attainment of basic literacy and numeracy skills;
3) integrate relevant "development" information and skills into the academic program; and
4) ensure that there are no academic or physical obstacles to girls' continuing on to higher stages of education.

These strategies address both quantity and quality objectives.

Providing quality cost-effective schooling opportunities to as broad a spectrum of the population as possible

The problem

Developing countries have limited educational resources, and these tend to be used up by costly construction and other physical inputs such as lengthy preservice teacher training and staff salaries. In remote areas, teachers tend to be minimally qualified—they have low levels of education and may lack the confidence to take on the challenges of classroom teaching. Educationally disadvantaged children often reside in difficult-to-reach, remote, and scattered settlements. Their parents may be poor and unable to afford either the actual costs of schooling or the opportunity costs of losing their children's labor. They may hold conservative views that prevent or limit the duration of their children's participation. All of these conditions are especially true for girls.

> Hanushek and Lavy (1994) conclude that the equity-quality tradeoff is misstated. If school quality improves, attendance and completion will follow. A student attending a higher quality school will tend to stay longer than one in a poorer quality school. If all students attended the best quality school of their sample, the dropout rate would decrease by two-thirds or more. They found that one year in the best school can be the equivalent of more than two years in the worst school in terms of achievement gains.

The strategy

Education programs until the present disproportionately emphasize physical surroundings and staff qualifications rather than the development of desirable skills. If scarce resources are to reach a larger audience, a new approach is needed that diverts attention from high-cost delivery components such as construction and expensively qualified teachers to more cost-effective alternatives. Central to such an approach is a self-evident, easy-to-use program that might be delivered in a variety of ways appropriate to the context and especially to the conditions of girls. The central element in this program would be a transportable package of necessary learning components, including at its core student textbooks with teacher instructions, practice exercises, and assessment questions. Physical inputs to the package might also include a free standing blackboard,[2] chalk, and such reusable writing materials as slates for children.

> The students' failure to learn is a failure of the school, and to attribute failure to the students themselves is to blame the victim, and to lose sight of the purpose of schools. (McGinn 1992: iii)

The features that make the program transportable and flexible include the following elements. The program would:

- be self-contained so that it could be implemented anywhere:

[2] Observations in rural Pakistani classrooms showed how difficult it was for a teacher to teach a large group of students without a blackboard.

in a community building, in someone's home, under the trees, and in conventional school settings

- have simple instructions that make it possible for any sufficiently literate person to teach it after orientation
- consist of discrete lesson units that can be used in any scheduled time frame of daily hours, days in a week, or number of primary years as long as they are completed in sequence
- permit peer or parent teaching and self-instruction after basic literacy is achieved
- make it possible for children to start and finish at any age
- allow successful completion to be assessed on evidence of skill development rather than time spent in the system

The resources saved through less costly infrastructure would permit the development of effective support structures for the program. These might include:

- assistance in establishing the program in a form that best suits local communities' needs (possibly through NGOs)
- basic training for local literate individuals to become teachers and short periodic inservice trainings as needed
- supervision and other teacher-support systems
- curriculum-based assessment to measure program effectiveness and provide a tool for teachers in instruction

Delivery of this program would be accomplished in ways convenient to the local context and resource capacities. Communities might ask for these programs and provide a location and a teacher candidate. Or facilitators from NGOs or the ministry of education might be given responsibility for mobilizing interest in and implementing the program. Donors might provide initial funding for technical assistance to supervise the development of the quality program package, and to provide some training and other support, and they or the ministry of education might subsidize the whole program for targeted disadvantaged communities. Effective accountability mechanisms would need to be installed at all levels to ensure the performance of those delivering the program and its supports, including teachers, supervisors, and developers. Ultimately, local and national institutions would develop capacity in their own staff to provide support functions for the program. Savings to the government could be spent in reducing the inequities of opportunity to various groups.

> "Improved quality can lead to increased quantity, if the focus is on efficiency." (McGinn in Cuadra 1989: iv)

Especially disadvantaged groups such as girls could be identified and accommodated through modifications or elaborations in the basic design, for example, with:

- an interactive radio program to support teachers who are barely literate, do not know a particular subject well, or need a special kind of training;
- supplementary materials to help children where the language of instruction is a second language;
- enrichment or supplementary materials to remediate or explain difficult concepts in the primary curriculum; or
- self-instructional materials in upper primary grades for those who must drop out of school, where subjects are too difficult for a local teacher to teach, or where multigrade classes or other conditions reduce the instructional time available.

If the program is self-evident and self-contained, it can be delivered to a variety of difficult-to-reach children, even without the full support system, such as:

- children in small settlements not large enough to cost-effectively establish a school;
- remote groups difficult to access on a continuous basis;
- nomads;
- girls attending "home" schools or remaining at home after a certain age; or
- dropouts who want to start studying again.

It can be delivered through a variety of agents, including:

- teachers who move with their clients;
- teachers who visit their students periodically;
- interactive radio instruction and a facilitator;
- local NGOs, community development associations, mosque or church groups, and other community or volunteer organizations; or
- private organizations or groups of parents.

In summary, a self-evident transportable program can accommodate the needs of all children, including those in conventional schools, those who are out-of-school, and those who are hard-to-reach. By focusing resources on the instructional program rather than construction and other costly inputs, resources are freed to ensure that quality learning can occur within the limits imposed by local conditions. This approach, in effect, reverses the usual one, which assumes the presence of

> Research in Africa "demonstrate[s] that improvements in school quality can have indirect as well as direct effects on achievement, the indirect effects occurring because of the effect on participation (enrollment, attendance and continuation), which in turn affects achievement." (Ridker 1997: 16)

schools, single-grade classrooms, qualified teachers, and other advantages. Rather it provides the minimum comp-onents required for quality school-ing regardless of the circumstances in which they are placed.

Providing an academic program that ensures the attainment of literacy and numeracy skills

The problem

Many children attending school in developing countries are not learning what they need to know in primary programs. The fault resides in poorly-prepared teachers, inadequate teaching methods, poorly designed and teacher-dependent instructional materials, and an unsystematic approach to learning. Usually there is no mechanism to reflect on the weaknesses in the system or to improve them. Girls are often more vulnerable to these conditions, especially when education is seen as less important to them.

The strategy

To improve skill development, the most productive entry point in an academic program is through instructional materials. These materials act as the blueprint for what must be learned and how it must be learned. All other learning activities can be organized around materials if they are well designed. The materials should demonstrate desired types of teaching/learning, offer special techniques to improve basic skills and systematically build elements one on another to develop ever more complex skill levels. Textbooks can even help offset local gender biases by creating an environment of balance through careful selection of the content, images, and language that are used. Textbook development is a scientific process best supervised by an expert in curriculum design working with local educators who know the language, background and level of understanding of students in different grades and have an understanding of the local context. Teachers are an ideal choice to assist this process.

Student textbooks constitute the core of the transportable program described above. They should reflect the curriculum objectives of the country in which they are used. Almost all countries develop a set of objectives intended to align the elements in the education program from instructional materials to training to supervision to assessment. A quality program, in effect, is one where all these parts align to produce anticipated results; a poor program is one where these parts bear little relation to one another.

The textbooks should be self-contained in that they include brief teacher instructions, practice exercises, and assessment questions. For maximum effectiveness, each lesson should consist of a simple format that structures the performance of teachers toward more interactive, problem-solving and higher-order thinking skills in students. The minimally-qualified teacher can rely heavily on the textbook lessons, while a better-qualified teacher can elaborate his or her teaching in any way desired as long as the students demonstrate satisfactory learning results.

Initial staff training can be organized around the books.[3] Teacher candidates (local literate persons) would be given a few days "crash" training consisting of what they need to know immediately to cope in a classroom environment. Included would be basic record keeping, a review of the learning objectives and how they align the components of the program, and a concentrated training on how to use the program package. The burden of training would rest in this initial stage on understanding and practicing the consistent format that is used in every lesson of the textbook. After a few months in the classrooms, teachers would return for short in-service programs to address classroom needs they and observers have identified: for example, reinforcement in the use of the package materials, classroom management, discipline, upgrading of subject content knowledge, etc. As time progresses, these short trainings might include more theoretical training on child development and alternative learning methodologies but only after the teacher has enough practical experience to find this information useful.

Teaching practices to increase student achievement: Evidence from Pakistan

The students of teachers using systematic approaches demonstrated higher achievement than students of other teachers. A lesson was more successful if it involved a variety of practice tasks. The systematic steps included:

- Review of previous work
- An indication of the purpose of the lesson
- Presentation of new material
- Teacher-guided practice
- Independent student practice
- Homework

(Rugh et al. 1991.)

"Teachers work hard in the application of their skills. They have little or no energy at the end of the day to question and access the effectiveness of their own actions." (McGinn 1992: iii)

The support system for this program can be provided temporarily by independent facilitators such as those who work with NGOs. Ultimately,

[3] Teaching methods and teacher training are not discussed in great detail here for several reasons: 1) both support the attainment of results and consequenty need to be modified in each context; 2) no single set of teaching methods has been found that consistently produces high levels of achievement; and 3) teaching-learning and the relationships involved are highly culture-specific and thus difficult to recommend in a general way.

however, it increases the chances for sustainability in traditional institutional structures if the facilitators and supervisors are from the education bureaucracy and if their job descriptions include these activities. Their role would be, first, to provide the materials-specific training to teachers before they enter the classroom. Second, they would assess student learning at prescribed intervals to determine whether children are achieving the skills covered in the lessons. If a sufficiently high number of the students in a class met the objectives, then the supervisor would assume the teacher was doing his job adequately and would not interfere until the next periodic test. If the students in a class performed poorly, the supervisor would investigate further to determine whether the problem resulted from deficiencies in the teachers' training, attendance, or something else and would institute remedial help as required. By focusing support on teachers whose students are not doing well, limited resources can be used more cost-effectively to strengthen the weaknesses in the system. Supervisors would not make equal numbers of visits to each schooling location, but rather would make more frequent visits to teachers who most need their help.

> "There is a growing body of research that demonstrates that 'opportunity to learn' is one of the major factors explaining levels of learning....teachers often fail to teach the curriculum." (McGinn 1992: iii)

Continuous, curriculum-based assessment would constitute the critical mechanism of accountability. It would have three functions: to ensure the acquisition of skills, to model for teachers the kind of learning expected, and to serve as an instrument for teachers to improve their students' skills. It would thus test the end product of teaching/learning and drive the kind of instruction that goes on. Testing would be based on criterion-referenced items that reflect the curriculum objectives (elaborated by grade and subject as necessary). These would be the same objectives that had informed the lessons of the textbooks, and that teachers received in the earliest "crash" training. The main purpose of testing would be to assess the effectiveness of the program, i.e., to determine whether all the components are working together to produce the learning results desired. The tests would not be used for student promotion and consequently could be given in impromptu sessions without special student preparation. Curriculum-based assessment is key in a program that is implemented in a variety of circumstances with minimal supervision. It ensures that the system is accountable for producing learning results in all children.

> "The school's failure can be assigned to two major kind of factors... when (children) are not taught the content of the tests.... and when teaching methods are inappropriate to their level and style of learning." (McGinn 1992: iii)

The quality reform suggested here assumes that:

- quality is achieved when components of an education program are aligned to produce defined learning results;
- education programs act as systems with constituent parts that affect one another and cannot be treated separately;
- reform can start in any number of components of a system, but once started other parts must be drawn in, in logical and supportive relationships;
- learning results must first be defined as sets of competencies, levels of learning, or (existing national) curriculum objectives in order to focus activities and to know when expectations are met;
- that improving quality implies an ongoing process of attempting to achieve ever-closer approximations of a nation's education objectives;
- staff members who support any initiative will build grounded skills by experiencing the activities of implementation (needs assessments, program development, training, and testing) rather than through theoretical training;
- this kind of training can be facilitated through technically structured processes (built on conventional scientific methods) with local participants providing local content and locally suitable methods to produce results; and
- routines are more likely to be institutionalized over the long term than activities relying on variability and novelty.

In summary, the present crisis in program quality in many countries calls for a systematic approach to improvements. The approach proposed here outlines structures and processes for improvements but does not dictate the specific objectives, content, or methods that would be used to achieve results. Girls are likely to benefit most from high quality programs.

Integrating relevant "development" information and skills into the academic program

The problem

Disadvantaged communities often do not have access to the "development" information they need to improve the conditions of their life. Even when they have access to media, the programs may not offer this kind of information, or may present it in a way that is not relevant or useful to them. Girls and women, upon whom much of the responsibility falls for educating children and maintaining the health and nutrition of families, are especially disadvantaged by this lack of information. Educators often do not see this life-skills information as

essential or are reluctant to add it to the curriculum because they feel it takes time away from core academic subjects.

The strategy

"Development" information does not have to stand alone outside core content. It can be integrated into lessons as instructional materials are developed. If presented in reading passages, it can address the multiple objectives of providing practice in reading and comprehension skills and at the same time conveying important development messages. The aim is to ensure that students absorb the development messages, a requirement that fits well with comprehension questions in a textbook. To ensure the greatest effectiveness of the information, the presentation should fit local methods of expression—that is, be embedded in narratives that use local descriptions, in role plays with familiar characters, in dramatizations, songs, poems etc. Children need to be asked about their own experiences with the problem to draw their attention to the relevance of the material in local environments.

Writers of these materials need to describe the specifics of the development problem, its local signs and terminology, and to suggest solutions that fall within villagers' capabilities. This kind of material is best written by those who know the students, their language levels, and the circumstances of the area where the materials will be used. Assessment questions need to be included so teachers can make sure children have grasped the messages.

Information is empowering in all societies but particularly so in subsistence communities where it can prove vital to survival. Information about health, nutrition, simple first aid, child development, HIV/AIDS, etc. can make a difference in these communities. Girls, who may have fairly low status in such communities, are empowered by this information when they convey it to their parents to solve pressing problems of everyday life.

Ensuring that there are no obstacles, academic or physical, that prevent girls from continuing on to higher education stages

The problem

Numerous obstacles exist that prevent girls from continuing to the next stage of education. The four most important are that they may have to pass major exams intended to narrow the field of those continuing on; they may not find accessible schooling opportunities; their families may not feel they can bear the cost of their continuing on; or their families and communities may not believe continued schooling is necessary to girls' adult roles.

A major hurdle for many children is the exams (often prepared at the national level) that they must take at the end of primary schooling. It may be the first time they experience tests other than those prepared by their teachers or local authorities. These national exams are not usually designed to determine whether children have acquired the skills set in the national curriculum. Rather, they frequently test the child's memorized knowledge of textbook content. In math, a single problem may combine so many opportunities for mistakes that it is difficult to determine which skills a child has mastered. The undeclared intention of these tests is to reduce the number of children advancing to the limited number of places in the next stage.

"Testing to Learn"

"(There is) a growing recognition...that what is tested is what is taught in schools.... Testing, as the "gateway" mechanism for students, and as a means for monitoring educational quality and efficiency of a nation's schools, has increased in importance as education competes with other sectors for scarce resources...." (Moses in Capper 1996)

The strategy

An appropriate strategy in such cases might consist of two parts: to determine how opportunities in the next stage of education might be cost-effectively expanded, and to align tests at the end of the current stage of education more closely with curriculum objectives. The latter, of course, only works when the program itself is aligned with curriculum objectives. A child should be able to continue to the next stage if he or she has achieved the expectations of the national curriculum. Education officials are more likely to accept this point if modifications in testing occur in the larger context of aligning all parts of the academic program to the national objectives. A system that has continuous assessment of student skills should not need a major exam between stages. Such exams only encourage early dropout and discourage continuation.

How can opportunities for next-stage schooling be expanded without major increases in the education budget? The problem is similar to that of expanding first stage opportunities. If the expansion focuses on an easily transportable program rather than on construction, savings can be devoted to effective program supports. Higher stages of schooling require better qualified teachers and more facilities like science labs and libraries. However, if greater investment is made in improving the quality of textbooks and if they are largely self-instructional, good teachers can serve the needs of a much larger group of students through correspondence, rotational visits, radio, and by other means, and students can do most of their studying at home. Libraries, labs, and tutoring centers can be located in central places where they are accessible to as many students as possible. Those who cannot access such facilities can be provided compensatory materials.

Exams would determine whether students at this higher stage had acquired the skills outlined in the curriculum, and if they had, they would advance automatically to the next stage. Overall, a well-thought-out system of this kind would cost less to the country and to parents. Savings in buildings and teachers would be converted into investment in excellent instructional materials, and these might be subsidized in whole or in part to keep the costs of schooling as low as possible. Parents would also be spared daily transport expenses, special uniform and clothing costs, and other school fees associated with a normal program. The knowledge that their primary school children might continue to higher stages would be an incentive to parents to enroll and keep their children in school. In addition, a program that allows students to study at home would encourage conservative families to continue to educate their daughters. Quality control would be maintained in such a dispersed student population through mastery exams.

> "Planners need not regard their choices as being between expansion of quantity, or improvement of quality..., efforts to improve educational quality can also improve the internal efficiency of education systems, freeing up resources that can then be used to provide more space for new entrants." (McGinn in Cuadra 1989: iv)

Implementation models

This section presents two implementation models for the strategies above. The first can be used generically to approach any reform activity, including those mounted under the conditions existing in many education bureaucracies today. The second anticipates a more ideal situation when efficiencies and effectiveness dictate the shape of educational institutions. While idealized, the second model is still practical. Indeed, a number of its seemingly radical departures have already appeared in the initiatives of some countries. Others are suggested by similar approaches that have been used effectively in other sectors to produce results.

Two models have dominated international assistance to the education sector in the last few decades: the production-function model and the organic model. The first assumes that the right mix of quality inputs lodged in a smoothly functioning system will produce appropriate learning outcomes (see Odaga and Heneveld 1995 for a description of this model). The difficulty with this model has been in defining what the right mix of inputs is and deciding which leads to specified outcomes. Even when the links to learning have been confirmed, the inputs may not produce the same results as they do in other settings. The belief, for example, that student-centered teaching strategies are crucial to producing quality learning outcomes reveals cultural expectations about human relations that are not present in every

schooling context. While such strategies can be "forced" on others, to do so usually requires costly supports to make them work properly. The problem in this model lies in the assumption that certain inputs always lead to certain outcomes, without testing results to determine whether they indeed work in the same way in a new context.

The second model holds that schools should be treated as organic social systems with sufficient autonomy to evolve according to each school's context. There is enough truth in this model to convince some educators to give schools and teachers the freedom to experiment with a variety of teaching/learning options (with modest training and support). This model assumes an unrealistic view of teachers' capacities and the classroom conditions in some countries, and the absence of incentives that encourage an independent search for excellence. Schools are indeed organisms that absorb incoming messages in their own way and with their own results, but in many contexts their personnel want and need more direction. Neither model offers structures that would require accountability from the system.

In short, while the production-function model contains too many unvalidated assumptions in new contexts, the organic model exerts too little control over the actual outcomes. The first model provides certain inputs and expects them to produce a product, while the second simply hopes the right product will result. In both cases the outcome is in doubt. A model that might improve on these two is one that starts with an expectation about what the outcomes should be, designs inputs to produce the results, and finally tests to ensure that the results occur. This model provides tested inputs, yet leaves room for the uniqueness of each school setting. At the same time it insists that staff be accountable for results. The models below suggest how this might be done.

The process model

The process model described here is suitable for many kinds of environments, including ones where developer-practitioners work through traditional ministries of education with centralized, hierarchical structures and functional responsibilities distributed among units that have little connection with one another.

This model is not new. Rather, it elaborates a conventional model used for research, development, and evaluation (RD&E). The reason for describing it in detail is that though its assumptions often underlie the components of project activities, they are almost never described thoroughly in project documents or implemented fully in practice. It is this fact that may lie behind the failure of so many field initiatives in the education sector.

The model consists of a series of action steps that follow logically upon one another. It is useful as a framework for approaching and overcoming almost any development problem and its value lies in the fact that ***it is an approach rather than a prescription*** for solving problems. The process itself is essentially neutral while the content is locally defined. Each step takes as long or as short a time required to fulfill its function. The process has no end but rather constitutes the basis for a continuous cycle of improvements.

The core steps in the model are to identify and understand the problem; develop a program that addresses the problem; test the program in experimental trials to ensure achievement of its objectives; to modify it accordingly; to disseminate the program where needed; and to continue to monitor the results. Experience[4] suggests that better results can be achieved if the core steps are expanded to ensure the involvement of all those with an interest in the outcomes.

A suggested set of expanded steps consists of the following:

1. Identify a general problem (in this case girls' retention).
2. Specify the partners for the initial stages (policy makers, researchers, and program developers): set the objectives and scope of the activity.
3. Collect general information on the problem including pertinent literature and statistical topographies (places, groups, patterns of participation in the area concerned); make hypotheses about possible constraints, and decide which are most amenable to solution.
4. Identify target groups from this information.
5. Collect enough information on the target groups to understand the problem thoroughly: talk to fieldworkers who have worked with the groups, make visits to sites, talk to thoughtful members of the groups; test hypotheses on constraints, identify issues and possible solutions.
6. Develop plans with the partners to address the issue(s), including proposed interventions; specific target objectives.
7. Develop the intervention/program with the partners.
8. Test the intervention in limited field trials to see if it achieves the expected results; observe how it may be improved.
9. Modify the intervention according to the results of field data, and develop supportive structures (e.g., training supervision,

[4] An approach like this was used successfully in the Pakistan Education Development Program between 1990 and 1994 to address issues of quality (see Annex).

monitoring, and assessment) required to obtain and sustain the best results from the intervention.

10. Test again to see if results improve and supports are adequate.
11. Plan dissemination including the modifications necessary to move from small to large scale use of the program.
12. Disseminate carefully and continue monitoring for results; continue to feed ideas for improvements back into the system.
13. Work out long-term structures to sustain the program including institutionalized processes for monitoring results, reflection, and improvement
14. Identify other aspects of the same problem or new problems and address them in the same fashion as above.

Several of the lessons learned from field experience include the following:

Initial study

Understanding the problem does not need to take a great deal of time. People bring an understanding of their problems to the discussion (and they become impatient with time-consuming interviews). The outsider (international expert or ministry official) brings another perspective, a broader range of solutions, knowledge of past experience, and sometimes extra resources. Besides gaining a better understanding of the problem, those local people involved in this exercise with support from the outsiders should take responsibility for solving the problems.

Partners

The practitioner needs to choose partners judiciously. Partners need to be those who will implement the program over the long run and therefore need to be involved in a way that is appropriate to their functions, as policymakers, managers, administrators, trainers, materials developers, supervisors, assessment personnel, etc. The involvement, however, should be broader than their simple functions. For example, materials developers need to see classrooms and how teachers operate in them, they need to see how their materials are used, and they need to analyze achievement results to see where their materials may be weak. Those who experience the process evolve in their thinking about the problem and that experience sustains the improvement cycle over time.

Small-scale trials

It is important to test most interventions carefully in small scale trials before disseminating them to larger groups. Many successful programs (for example BRAC and *Escuela Nueva*) started small until their interventions were well-developed before expanding them. It is risky to move quickly, since it is more difficult and costly to correct problems once dissemination has occurred. Many instructional materials and

teacher training programs in various countries have made this mistake, and as a consequence outcomes have been impaired.

Scaling up projects

Disseminating tested programs to a wider audience differs from implementing small-scale models. Not as much close supervision occurs, conditions may not be as optimum, modified inputs may not be as effective, more groups are involved, and activities lose the luster of being new and different. (BRAC and *Escuela Nueva* both had difficulty with the quality of their programs when they scaled up; IMPACT in the Philippines had difficulty gaining the cooperation of the education bureaucracy.)

Evaluation

Assessing program success is a critical part of improvement. Formative evaluations are a tool to shape and produce better results. This kind of on-going evaluation is best used to serve the interest of program developers, i.e., the developers themselves should collect information to know first-hand how their programs are being implemented, how they might be improved, and whether they are meeting their objectives. It is difficult for others to understand as fully as the developers whether programs are being implemented as intended and, even were this possible, for independent researchers to convey the details of their observations completely enough to fine-tune program design effectively. When program designers act as their own researchers, it behooves them to set high standards, so they may ensure success in later summative evaluations by outside researchers. In most projects these summative assessments come too late to be of much use in program improvement.

Reflection process

Very few education systems[5] have institutionalized mechanisms to reflect on and resolve problems. These in essence constitute critical diagnostic tools for discovering weaknesses and strengthening them. Bodies of this sort need to gather information on relevant issues, convene those individuals with related responsibilities, and reflect on the actions that can be taken to resolve the problems. There is little point in assessing or monitoring progress if the information is not used. While projects tend to be keen on monitoring, most do little reflecting on the information they collect.

Continuous improvement

It is better to create a system like the one above that continuously corrects itself than to expend major resources on an approximation of "perfection." What appears now to be a "perfect" product may not be

[5] BRAC has a whole unit devoted to collecting information on and resolving issues of implementation and program quality. It is refreshingly candid in reporting weaknesses, and flexibly devoted to correcting them.

so ideal in a few years or in other contexts. If a process exists for continuous correction, however, even today's imperfect solution becomes, in each iteration, closer to some ideal and, more importantly, those involved know how to improve results. Developers/practitioners should establish routines for improvement rather than to perfect the details of interventions if they are seeking sustainability in their programs.

The accountability model

The second model suggested here reflects recent trends in primary education in developing countries. Although the model appears radical at the moment, it may prove inevitable in the context of ever-increasing numbers of children and shrinking budgets.

This second model provides a larger context for the process model described above. Its priority is cost-effective service and accountability to all its clients (parents, children, and especially girls). The emphasis is less on how to achieve results (each schooling context may get there differently) and more on ensuring that they are obtained. Both priorities contrast with the way many education systems operate now: they are not accountable to parents and students, and they stress teaching behaviors rather than learning outcomes. Accountability, to the extent that it exists at all in these systems, reports up the chain of command to supervising officers rather than to parents and children.

A number of concerns underlie the development of this model: school-age populations continue to grow, demand is frustrated by lack of educational opportunities, costs of education are increasing, and returns to parental investment in education are declining. Current budget levels barely maintain existing systems and little is left over for expansion or quality improvements. Aggravating this situation is the fact that many education systems are inefficient and wasteful: inputs are developed independently and based on untested assumptions about learning, support systems are ineffectual and contradictory to one another as well as to the teaching/learning they are supposed to support, and the civil service and other bureaucratic structures act as constraints on motivation, innovation, and efficiency. As a consequence, learning results are poor, children repeat grades and drop out, and little systematic effort is made to improve the situation. Governments find that competing development needs for national resources make it difficult to sustain the costs of educating all children.

This second model suggests that educational institutions need to change significantly if they are to produce better results for more children at the same cost to the nation. At issue is how to draw more effective, efficient performance out of existing capacity. The model assumes structures can be established within education institutions to encourage

productive, efficient behavior and discourage unproductive behavior without imposing too authoritarian a cast on the process. A well-planned model such as this can produce a better, more cost-effective schooling experience for larger numbers of children including those like girls with special needs. The outlines of the model are:

Reformulated roles

In a reformulated education system, national education institutions would be charged with managing education services (rather than as synonomous with the structures and activities of the education system itself). To support their management efforts would be an RD&E unit that identifies "customer" needs for education and training, reports these back to management, and organizes necessary development and experimental testing of program solutions. For example, this unit might identify a large demand among parents for an accelerated primary program for older children.

There are two options. First, ministry management might look into the costs of developing and supporting the identified program and decide that it is feasible. They would let competitive bids for the different elements of the program to private companies specializing in their development. These companies would be required to meet ministry specifications regarding learning objectives, support programs, costs to consumers, and ultimately learning results. Their contracts could be severed or penalties imposed for not meeting specifications, agreed-upon milestones, or time deadlines. The ministry might also choose to outsource other activities related to implementation of the program such as its dissemination, supervision, support, monitoring, and testing, or it might want to reserve some "results-testing" activities for itself.

> "There is need for an organization to emerge that could serve as a clearinghouse. One of the entity's first tasks might be to produce generic program materials for free adaptation by any country wishing to use them." (Dock and Helwig 1999: 62)

The ministry would concentrate on such management functions as financial feasibility of projects including, besides actual costs, the potential for cost-recovery, letting contracts, and, most important, providing seamless integration of all the outsourced components of an activity. Eventually they would ensure and credentialize results. The ministry would be held responsible for the results of its programs by politicians, who are, ideally, also accountable (to the electorate). They might also be held accountable by an independent board of outstanding citizens who review ministry activities and results. More important, the ministry would have to make sure its programs produced results, or parents could take their option of adopting alternative programs (see below).

In the second option, instead of organizing program development itself, the ministry might encourage private firms to develop and deliver programs, working with them to develop agreed-upon program objectives and standards that the ministry would credentialize at a later date. The ministry would retain its own evaluators to assess results. The firms would sell their programs to communities, and therefore it would be in their best interest to make them as high quality as possible. This option opens the possibility of firms competing for larger market shares through the production of increasingly better programs.

Customer focus

Communities and parents would be the customers for these program packages and would select packages based on their demonstrated results. These results, as assessed by the ministry or an independent body, would be forwarded to them to decide which best meets their needs. Parents would manage local schooling through an elected PTA that decides upon and supports teachers, a venue, and the learning package. On a daily basis, they would monitor teacher and student attendance and solve other management and administrative problems. They would review program results, hold meetings with staff of firms responsible for program development, demand clarification of results, and decide whether the program would continue or another one would be installed.

The "packaged" aspect of the program design suggested above would make it easy for the private sector to satisfy the needs of difficult-to-reach children. They could deliver the program to remote regions with roving teachers or to secluded girls by gathering them into a neighborhood house. Customer convenience would come first, and it would be up to the private parties to convey the program to the place and in the form that is required by the special needs of the clients.

Communities would purchase the education and training courses they needed. They would not be constrained in educating their members by age restrictions, scheduling limitations, and other requirements of the present system. Evidence of children's (or adult's) ability to achieve the program objectives would be sufficient to determine the issuance of diplomas and degrees rather than time spent on the program or the ages of participants at entry or exit.

Incentives to produce results

Current civil service structures tend to reward longevity and political loyalty rather than the production of results. The task of the new model would be to create incentives that encourage members of the scaled-down bureaucracy and teachers/trainers to do their jobs well. In an ideal world, personnel within the ministry a l those hired by communities would be given renewable contracts w fixed numbers of years

of service. Renewal would be based on performance criteria. Ministries and communities could also set up merit pay plans for their employees, with annual salary increases tied to performance evaluation. This would allow employers to reward those they believe function well and encourage others to leave.

The number of ministry or local staff required could be calibrated through phased-in retirements that lighten an older employee's teaching responsibilities over a period of years determined by the need either to bring younger, cheaper teachers into the system or to encourage experienced teachers to extend their terms of service with a smaller load when vacancies cannot be filled. In a top-heavy system, benefit plans could be manipulated so there is no extra incentive to stay after a certain number of years. For those on contract, the option would be simply to terminate the contract when the system no longer needs so many employees. A better calibrated personnel system like this should make it possible to pay higher salaries to those who are retained.

Equity concerns

Programs based on demand have three main difficulties. The first is that communities might not bother to become involved and continue their non-enrollment practices. Second, they might choose programs that do not meet national objectives for an educated population. They might, for example, choose vocational or literacy programs over a full-scale primary program. Third, some communities may not be able to pay for educational programs that are considered basic for national development, or they might pay for some children and not for others.

In all these instances, the government could exercise one or two options. It could contract NGOs to send facilitators to mobilize interest, and help communities decide on suitable schooling options. The government could also subsidize preferred options, such as a six-year primary program, to encourage their use. In the case of extremely poor or generally resistant communities, the government might subsidize the entire cost of the program. The important point is that by shifting many of the costs of education to communities, it is important not to create an inequitable situation where communities cannot afford access to the programs for all of their children.

The resource savings derived from no longer constructing schools could be invested in program development, which would leave communities paying mainly production and recurrent costs. There are several ways of making these costs affordable to villagers—by recycling books and using reusable writing materials, and by using bartering and in-kind sources of payment. Poor Malian villagers, for example, found it possible to contribute significant amounts to schooling. Also religious institutions

and philanthropic members of communities often underwrite the expenses of poor students. Still, one of the important responsibilities of government would be to keep close tabs on the situation to ensure that no child becomes disenfranchised through this new way of delivering education.

In brief, this "accountability" model suggests taking advantage of techniques employed by the private sector to cost-effectively and efficiently produce results. It calls for revamping the management role of educational institutions to focus on customer programs and services. It suggests the need to outsource production, delivery, and support of school programs to private firms or individuals with a competitive edge over others. It holds ministries responsible for seamless coordination of outsourced parts and the assessment and credentializing of program results. Parents, as customers, could choose and support courses that fit their needs using evaluation results to enable them to make more informed decisions. Government subsidizes would target disadvantaged groups, and encourage adoption of programs perceived to be of most benefit to the nation. Personnel incentives would be used to motivate and encourage highly skilled persons to enter and remain in education service.

While the second model seems far-fetched at the moment there is evidence that its logic is already overtaking parts of the education sector in some countries. In Mali for example the Ministry has relinquished its role in constructing schools, and communities are taking on much more of the financial support—now with some help from donors and NGOs, but eventually on their own. The Ministry provides training, supervision, assessment and recognition of completion. New abridged curricula have been developed by PVOs, and local language learning and more relevant course content is occurring at the demand of parents. The low quality of public schooling in Pakistan has also caused a proliferation of private schools from the very modest to the very expensive, all vying for customers by offering enhancements such as foreign languages and computer training to their programs. BRAC in Bangladesh has long used results to drive improvements in its program and has shaped its program to the conditions of its customers.

Many countries outsource the production of their textbooks to private individuals and firms, but few as yet test them against established standards for learning, and consequently they often fall short of expectations. *Fe y Alegría* in Latin America combines public support (teacher salaries) with a cost-effective privately supported decentralized program focused on the local level. Successful program innovations initiated in individual schools are communicated through *Fe y Alegría*'s central offices, where their role is defined mainly in terms of support and service to local

schools. GABLE uses marketing techniques in Malawi to disseminate important messages about girls' education—the same kinds of techniques that might be employed in promoting education programs in this new model. The alternative primary program in Honduras gives older students a chance to study alone or in groups and to receive a diploma once they have demonstrated mastery of primary learning objectives. Analysis of this program suggests how a new «free market» system might work. Of interest are the supervisory, marketing and fund-rising activities this program employs.

Although the model is described in fairly detailed form here, this is not meant to imply that there is only one way to do this. Rather it is meant as an illustration of how private sector methods might be cost-effectively applied to the education sector. The controlling aim should be the development of cost-effective structures that encourage desired behavior and discourage inefficient, ineffective behavior without creating a punitive institutional environment. Already market-forces are creating some of these structures. In the next few years satellite communications will also bring a new dimension in flexible delivery to villages all over the world. How will these technologies be incorporated cost-effectively into the effort to provide all children an education? If we develop a vision of how these innovations might effectively come together, the transition may ultimately be a smoother and more productive one.

> "It is very possible and indeed likely that in the space of five years we will have low flying satellites capable of delivering web communication to villages in every part of the world. It will be possible for us to arrange for communications to poor communities and schools on a basis that is free, because many of the companies have indicated to us that for poor communities and for education, connectivity will be free." (Remarks by World Bank President James D. Wolfensohn at Second Global Knowledge Conference, Malaysia, March 7, 2000)

Conclusions

This chapter synthesizes basic but important strategies that past experience suggests offer the best chance of meeting the objectives of girls' primary completion. The approaches are conservative in terms of resources. They assume that a redistribution of current costs from expensive, less essential inputs to essential learning inputs and teacher supports is the best way to significantly improve girls' participation. While each context may also have additional barriers that warrant serious attention[6] it is well to consider whether in the long or short-term the diversion of resources to special needs is worth the reduction

[6] The Malawian initiation ceremonies that encourage girls to drop out of school at or before puberty is one such problem that needs to be specially addressed. The involvement of initiation counsellors in solving the problem is the kind of effective, low-cost method that is needed to solve such unique situations.

in support for comprehensive strategies that promise larger impact. Indeed, reforming the components of education systems to "fix" the girls' retention problem may do a great deal toward fixing other ailments of the education system (see Miske and Prouty 1997). It makes little sense however to implement individual solutions without first trying "the grand strategies" with potential to attract and hold the majority of children.

This chapter has also described two implementation models, one to solve individual development problems, and the other to restructure educational institutions into a quasi- "market forces" mode. The "process" model details a series of steps to address problems systematically. Used in conjunction with the second model, it can serve as a framework for solving long-term education problems.

How do these models affect the access and persistence of girls? The process model charts a way to identify and find solutions to the constraints on girls' education, and to ensure results before disseminating innovations widely. It reminds us that a "solution" at any given moment is only an approximation that needs continuing monitoring and adjustment. The second model serves girls by making resources more available and program delivery more flexible, efficient, and effective. It allows governments to widen the pool of resources from which they draw, including most importantly for sources of talent, expertise, and funding. With competition to reach all clients and greater emphasis on results and accountability, girls as well as boys are certain to benefit. In short, the more that resources are made available by cost-savings, the more widely educational opportunities can be distributed. The more flexible the delivery system, the more likely girls will continue their participation. The better girls' learning the more they and the nation will benefit. The more parents recognize the private benefits of education the more they will be willing to send and keep their daughters in school. In "solving" the problems of girls' education we need to look beyond specific interventions to see where these solutions fit into the overall scheme of education programs.

> "In cases of successful assistance donors focus on larger transformations, not on individual projects and flags."
>
> "Successful reformers have a vision of how things could be different in 10 years—different in outcome and in process."
>
> David Dollar, *Rethinking the Money and Ideas of Aid,* World Bank Group.

Key conclusions

- In the past we may have done a disservice to girls by expending resources on their specific unique constraints, when for the same money we could have funded "grand"strategies that might have done more to keep both girls and boys in school. Foremost among these strategies are improving program quality and relevance and creating more flexible delivery systems.
- "Generic" strategies can be suggested without violating the concept that the content and products should be controlled by local people and modified to meet local conditions.
- The rationales for investing in girls' education suggest four basic strategies: providing cost-effective schooling opportunities to as broad a spectrum of the population as possible, implementing programs that ensure the attainment of basic literacy and numeracy skills, integrating relevant "development" information and skills into the academic program, and ensuring that there are no academic or physical obstacles to girls' continuing to higher stages of education.
- If scarce resources are to reach larger audiences, attention must be diverted from high-cost components such as construction to more cost-effective delivery alternatives. Central to this approach would be a self-evident, easy-to-deliver program appropriate to a variety of contexts.
- A core element in such a program would be a transportable package of necessary learning components including high quality student textbooks with teacher instructions, practice exercises, and assessment questions, all tied to curriculum expectations. These materials—around which other teaching-learning inputs would be organized—can act as the blueprint for what must be learned and how it must be learned.
- "Development" information about health, nutrition, sanitation, environment and the like need not be separate from core content. It can be integrated into lessons as materials are developed and serve the need for expanded knowledge as well as skill development.

- Opportunities for next-stage schooling—like those for primary schooling—can be expanded without increased funding if expansion focuses on quality program components and flexible delivery options rather than construction and other costly non-essential inputs. Savings can be devoted to ensuring effective program supports such as training and continuous assessment.
- Access does not need to be "balanced" against quality. By concentrating on the program components required for quality learning and the essential delivery and support mechanisms needed for a variety of learning contexts, more children can be served at lower cost.
- This paper describes two implementation models. One is a "process model" to solve development problems, and the other restructures education systems into a quasi-"market forces" model. The process model consists of a series of action steps that are useful for approaching and overcoming development problems. The second provides a larger context for the process model. Its priorities are cost-effective service and accountability to its clients, parents and children. This model suggests that educational institutions need to change dramatically if they are to produce better results for more children at the same cost to the nation.

5. Summary and conclusions

Summary

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This monograph has provided an overview of girls' participation in primary education and suggested approaches that may help girls stay in school until they complete the primary level. It has reviewed research findings and conventional wisdom on constraints affecting girls' schooling and has examined initiatives that have attempted to effect changes in their levels of participation. Finally, it has presented practitioners with an array of strategies for how they may proceed given the present state of knowledge. While existing literature on these issues is immense, it does not yet provide, nor is it likely ever to provide, clear directions for how to proceed. If we continue to wait until it does, we may never solve the problems of girls' education. With well defined objectives for initiatives coupled with past experience and an experimental approach, it is possible to find approaches that adapt well to the needs of particular environments.

The monograph began by suggesting that the shape of the problem may not be exactly as we expected. From Filmer (1999), we saw that generalized female disadvantage in education is confined to certain regions of the world, mainly western and central Africa and south Asia. Wealth disadvantages by contrast are more widespread, affecting most countries of the world. When overlaid with gender, these wealth disadvantages usually intensify. The implication is that female disadvantage needs to be addressed specifically only in certain contexts, while in many others it may be largely a consequence of poverty.

In looking at research findings and conventional wisdom on the influences that affect girls' participation, Chapter 2 suggested a framework to simplify the large amount of information available. It is based on the assumption that when three major conditions are satisfied, the likelihood of girls' enrolling and staying in school increases. These are that: schooling opportunities exist and are accessible; parents have a positive attitude toward girls' education and are willing to sustain the costs; and girls themselves want to complete primary school and are capable of doing so. Other factors fit conveniently within these larger categories. The advantage of applying this framework is that once a major condition is satisfied, it and its many subfactors can be eliminated as issues needing further attention, and a practitioner can move on to other conditions that may be preventing girls' participation.

Chapter 3 presented examples of initiatives taken in different countries around the world to encourage girls' participation. They were described for their insights, but were not necessarily recommended for their impacts. Moreover, activities that prove successful in one context may not work in another. By arraying initiatives against the constraints, practitioners can prepare a matrix of possible actions for solving problems

of girls' education. Most initiatives that aim to increase girls' primary participation fall into four categories: those that expand the supply of schooling opportunities; those that mobilize support or provide incentives for girls' education; those that improve the quality of schooling programs; and those that increase the resources available for girls' education.

Chapter 4 took the discussion one step further, extracting what is most relevant from the experience of the initiatives, and integrating this material into basic strategies for contributing cost-effectively to the goals of girls' education. The strategies are based on the assumed rationale for investing in girls' education, which is improving social and private development returns. The implication is that there should be four related objectives for activities: retaining girls until they complete (at a minimum) the end of the primary level; ensuring their attainment of basic literacy and numeracy skills; providing "indicator-relevant" program content to increase the development impact of schooling; and supporting the transition of girls to higher stages of education. An education ensuring greater private returns for girls and their parents is likely to have the effect of encouraging them to invest further resources of time, effort, and money into extending girls' participation.

> We should not be misled into thinking that by solving girl-specific issues only we can make the greatest impact on girls' participation. In fact, by improving conditions such as program quality for all children, the impact may be even greater for girls.

The strategies suggested by these implications and described in detail in Chapter 4 are ones that: provide cost-effective schooling opportunities to as broad a spectrum of the population as possible; provide an academic program that ensures the attainment of basic literacy and numeracy skills; integrate relevant «development» information and skills into the academic program; and ensure there are no academic or physical obstacles to girls' continuing to higher stages of education. The text describes "generic" ways these strategies can be achieved without violating the concept that the content and products should be ones controlled by local people.

The annexes offer four examples in more detail of countries that have taken different approaches to girls' issues: Egypt with its emphasis on expanding opportunities, Pakistan with an experiential approach to improving program quality, Mali with experiments in community support of schools and providing more relevant program content, and Honduras with second-chance programs for those who do not complete formal schooling.

The discussion has focused on the way influences and initiatives affect girls and their families at the grassroots level. There are, however, two "national level" factors that can carry considerable weight in reform: political will and policy dialogue. The discussion highlights their role while cautioning against unrealistic expectations for their long-term impact. It suggests ways of broadening the dialogue through participatory experimentation with innovation before policy is set. In the long run, programs are likely to prove more appropriate and gain wider acceptance through this approach.

Finally, two implementation models are described that may be useful the first (the process model) in producing appropriate results, and the second ("the accountability model"), in developing a vision of how institutions might be more cost-effectively organized to accommodate both market forces and the new technologies about to revolutionize the way education is presented and delivered. There are elements of both models in many of the initiatives underway at present, but none carries them out to their full potential. The systemic approach to girls' education called for in several documents becomes relevant here. Not only do we need to look at girls' issues holistically and specifically but we also need to look at how they fit into the education system as a whole.

Conclusions

This monograph takes the position that development rationales for investing in girls' education make it imperative to address issues of quality and delivery in education programs. Poor quality programs may not attract the remaining out-of-school girls nor sustain the participation of enrolled girls if the private returns of education do not become more apparent to them and to their parents. While it is important to continue to expand educational opportunities for girls, few governments can continue to finance the present costly forms of schooling that focus on construction and lengthy preservice teacher training. These forms of schooling are inappropriate in many of the areas where girls' participation is limited. A carefully designed transportable program providing quality education at minimum cost with maximum of flexibility in delivery options promises to significantly add opportunities for girls, even in resource-strapped countries. This may be the most cost-effective way to expand access and ensure that girls especially will feel it worth while to continue schooling until the end of the primary

> "Direct satellite broadcast is the technology likely to have the most profound impact on education over the next decade." (Dock and Helwick 1999, 62)

level. When personal benefits attract more girls and keep them in school, national returns on related development indicators will also increase. An additional benefit is the effect better skill development will have on poor children who have few alternatives other than quality education to significantly compensate for their impoverished condition.

Key conclusions

- A transportable program that provides quality education at a minimum cost with a maximum of flexibility in delivery options promises to significantly increase opportunities for girls in resource-strapped countries.
- An education program that ensures obvious private returns for girls and their parents is more likely to keep girls in school. Indeed it may be the only way to encourage parents to expend the resources necessary for their daughters to complete the primary stage.
- When personal benefits attract more girls and keep them in school, national returns on related development indicators will increase, and as an additional benefit poor children, who have few alternatives other than quality education to significantly compensate for their impoverished condition, will acquire better skills.

Annexes: Introduction to the case studies

These annexes present case studies from Egypt, Mali, Honduras, and Pakistan. Each describes the country context, the education structure, participation statistics for boys and girls, the special issues of girls' education, and several of the important initiatives that have affected girls' participation. Then the case describes one or more specific initiatives that either had, or seemed to have had, the potential to improve girls' participation significantly. These initiatives include efforts to expand places in Egypt, community school experiments in Mali, a second-chance primary program in Honduras, and improving quality in Pakistan. The choice of these countries does not imply that these are the only significant initiatives that have affected girls' participation. Rather they were chosen because they were large-scale efforts to deal with issues believed to be significant in enrolling and keeping girls in school.

Egypt[1]: Focus on Expansion Options

Introduction

Egypt's five-thousand-year history and rich culture makes it unique in the world. A succession of invaders has come and gone—Persian, Greek, Arab, Turk, and British—without altering the essentially agricultural nature of its people. The Islamic invasion in the seventh century left perhaps the strongest mark on the country to date, leaving behind its religion and language. Al-Azhar University is still the most important center of religious studies in the Muslim World. Until recently, Egypt has been considered the cultural and educational hub of the Arab World, with Egyptian teachers, administrators, and technical professionals composing significant portions of the workers in the Arabian Peninsula. Now, although its deteriorating universities and school system have somewhat diminished that reputation, Egypt's books, films, TV plays, and dramas are still exported to the rest of the Arab-speaking world.

Egypt's area of roughly 1 million km^2 is bounded by Libya on the West and the Sudan in the South. With the exception of the northern coast, rainfall is scant and agriculture depends almost entirely on the Nile and its extensive network of canals and barrages. With the exception of the Nile Valley, the Delta, and several major and minor oases, the land is barren desert that only supports nomadic styles of animal husbandry. The fertile areas of the Nile have been likened to a lotus flower with a long narrow stem reaching from the Sudan to Cairo and a flower composed of the branching Nile in the Delta. Areas of highest population density and economic investment are concentrated in this northern "Lower Egypt," while underdeveloped "Upper Egypt" has fewer major population centers and more widely scattered villages. It is in the south, and in the regions bordering the Red Sea coast and the western deserts that education services are the most difficult to provide. Until recently, expenditure on rural areas constituted roughly 10 percent of the government budget with the rest invested in urban areas to satisfy Egypt's sometimes restive urban populations.

Egypt's population of more than 66 million people and an average population growth rate between 1980 and 1995 of 2.3 percent per year[2] (adding another 1 million people every nine months) gives it an exceedingly large and growing number of school-age children. Of this population, 95 percent live in the 10 percent of the land that borders the Nile and is fertile. The remaining 5 percent live in scattered oases or as semisettled nomads. Population density along the Nile is one of the highest in the world, and its growth rate outstrips land reclamation schemes, increased harvests brought about by the Aswan Dam, and

[1] Much of the evidence for this section is based on the author's 30-year involvement in Egypt, including published books, 1979 and 1989 assessments of Egyptian education, studies of the impact of USAID contributions on education, and the New Horizons Life-Skills Program for out-of-school girls.

[2] This, however, is a fairly modest growth rate for the region as a whole.

efforts by the government to create new jobs and expand opportunities for education and other services. The urban population now constitutes 45 percent of total population as a result of high rural-to-urban migration. Land redistribution schemes after independence subdivided large holdings into smaller plots, which, with further fragmentation through inheritance, forced many to seek their livelihoods in cities. The wealth gaps between the rich and the poor also grow perceptibly every year. It has been estimated that of children ages 15–19, the median years of schooling completed by the richest 20 percent is 10 years compared to 7 years for children in the lowest 40 percent. This difference is important, since education plays a significant role in class status in Egypt.

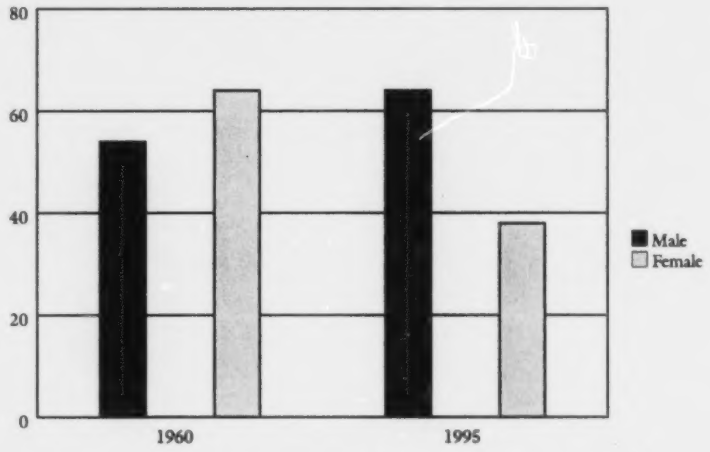
Egypt's population is culturally homogeneous, with the major divisions ones of social class and religious groupings. The vast majority (roughly 90 percent) is Sunni Muslim, with the remainder mainly sects of Christianity (Copts, Catholics, Greek and Roman Orthodox, and Protestants). Arabic is the common language, but as a spoken language it differs enough from the classical language to make learning its proper form one of the difficult tasks of childhood. Newspapers, newscasts, and formal presentations are usually conducted in a modified but educated form of modern standard Arabic. Most educated Egyptians also speak at least some English or French. The difference between those who speak foreign languages well (usually private-school graduates) and those who do not, goes well beyond the simple ability to communicate, to much broader implications for social, professional, and commercial opportunities.

After independence from British control in 1952, the government, acting on a popular grievance, declared its intention to provide education to all citizens. At that time in Egypt there was an extensive network of Koranic schools, a few important missionary schools in the governorates, some urban private schools, and a few urban "modern" schools established by the British to prepare limited numbers of locals for civil service and health positions. The sincerity of the new government was unquestionable, yet in the following three decades only a modest number of schools were built. During this time, however, the scarcity of educated professionals meant extended education was the one sure way members of the lower classes could move up the social ladder. By the 1980s and 1990s, degree "inflation" and a difficult employment situation (brought about in part by inadequate skill levels of public school graduates and their reliance on guaranteed government employment that was no longer readily available) made it more difficult to find jobs that would support a middle class lifestyle. By the 1990s, the poorly paid but "respectable" and stable government jobs—clerical

and teaching—were being sought mainly by women who appreciated the shorter hours and tolerated the low pay as a source of secondary, as opposed to primary, income for the family.

Egypt's per-capita GNP is $1,200 (1997), with a life expectancy of 67 years (1998), and a mortality rate for children under five of 69 (1998).[3] It has an infant mortality rate of 51 (1998) and an annual number of births that reached 1.7 million in 1998. About 25 percent of children under age 5 suffer from moderate to severe stunting. These figures are about average for the Middle East and north Africa region as a whole.

Fig. 1: Adult Literacy Rate (%), Egypt



Source: *The State of the World's Children 2000,* UNICEF, New York.

The adult literacy rate was 51 percent in 1995 with the men's rate (64 percent) almost twice that of women (38 percent). Women's literacy rates in rural areas are much lower. In 1960, the comparable rates were 54 percent for males and 25 percent for females, indicating that there has been some progress in the intervening 35 years.

Education in Egypt

The structure of education

Egypt's Ministry of Education is publicly committed to providing schooling for all primary and preparatory age children. Basic education has been compulsory at the primary stage since 1971 when the country's constitution stressed the right of free education to all Egyptians through the university level. Law 139 in 1981 extended compulsory education to the preparatory stage.[4] Basic education consists of five years of primary and three years of preparatory. Advancement is automatic in grade 1, and by testing in grades 2, 4, and 5. The first national exam is not until grade 8 as an inducement for children to persist until the end of basic education. Classroom or section inspectors make lower-level tests that are then administered by classroom or other teachers.

[3] It has made considerable progress since 1960 when the rate was 282.

[4] The fine (rarely enforced) for dropping out of school is only LE 10, which, next to the costs of sending a child, is very little.

Children may repeat once if they fail more than a specified number of subjects, but after repeating twice they are allowed to continue to the next grade. They must leave the primary system by age 14 whether they have completed the requisite grades or not.

Primary education is supervised by the Ministry of Education (MOE), which is responsible for educational planning, policy formulation, setting rules and regulations, technical supervision, quality control, and coordination of the various branches of the system. The country is divided into 26 administrative units or governorates that are in turn divided into districts. The larger governorates are under the direction of undersecretaries, while the rest are supervised by director generals. Policies are handed down by the MOE and the actual operation of schools is carried out in the governorates. The organization at the governorate and district levels follow the functional divisions of the central structure. Organizational units (the General Education Department, Planning, Evaluation, Building, Curriculum Development Center, Technology Development, the National Center for Educational Evaluation and Testing, and the General Authority for Adult Education and Literacy) carry out specialized functions at the center.

The formal education system in Egypt has been characterized as highly centralized, with little independent responsibility devolving to district or regional officials, despite the fact that Egypt has been trying to decentralize its schooling authority for decades. As a consequence, management tends to be weak at the local level, and many administrative details are still referred back to central ministry offices. Program quality is particularly impervious to local changes, since policy guidance and standard instructional inputs all emanate from central institutions.

Primary education is delivered through three main systems, a normal public government system, a large private system (most prevalent in urban areas) and a religious system, administered at two levels—Al-Azhar University and Al-Azhar Colleges (primary through secondary) that parallel the levels of the government primary system. This religious system is not described further here other than to say that although comparatively small (6 percent of students by one estimate),[5] it is, nonetheless, the fastest growing education system in Egypt.

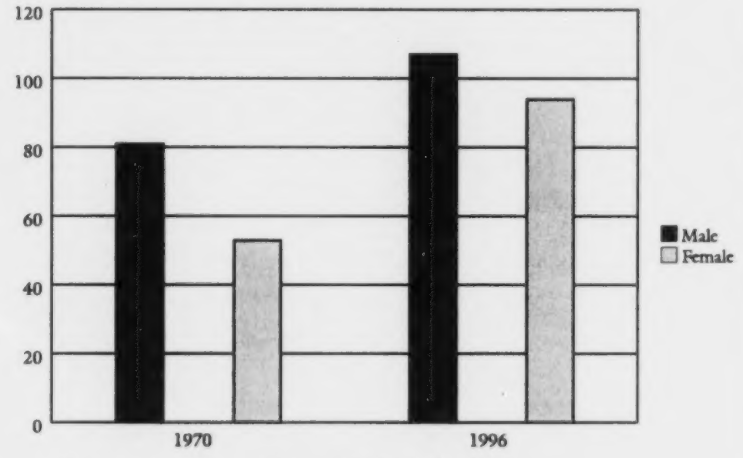
Schooling participation

Preprimary

Preprimary education tends to be private, cost fees, and be mainly available in urban areas. In 1970 the gross enrollment rate was 1.2

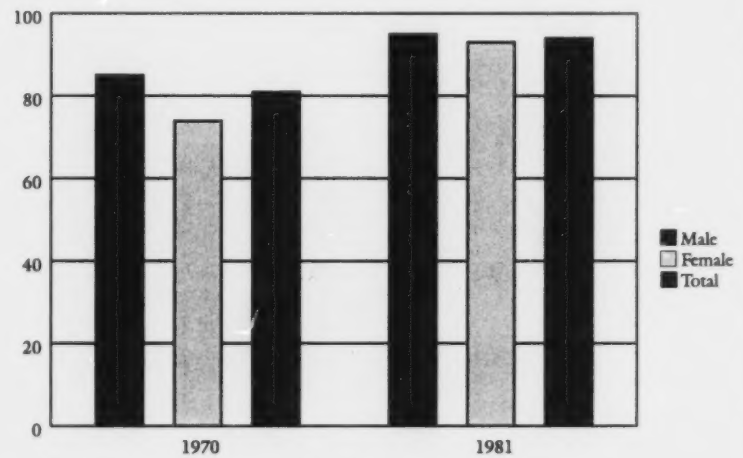
[5] In Ibrahim et al. (2000), the study sample showed 47 percent of 6–19 year old students enrolled in general primary education, 24 percent in preparatory, 7 percent in general secondary, and 12 percent in vocational secondary (12).

Fig. 2: Gross Primary Enrollment Ratios (%), Egypt



Source: unescostat.unesco.org/en/stats/stats0.htm

Fig. 3: Survival Rate in Primary (%), Egypt



Source: unescostat.unesco.org/en/stats/stats0.htm

percent for males and 1.3 percent for females. By 1996, comparable rates were 9.2 percent and 8.7 percent.

Primary intake rate

The primary intake rate rose from 91 percent for boys and 64 percent for girls in 1970 to 95 percent for boys and 86 percent for girls in 1996. Girls made a large gain during this period and the gender gap dropped from 27 to 9 percentage points.

Primary

The gross enrollment rate in primary rose from 81 percent for males and 53 percent for females in 1970 to 107 percent for boys and 94 percent for girls in 1996, with a gender gap in the latter period of 13 percentage points. Net enrollment rates have risen from 75 percent for males and 49 percent for females in 1970 to 98 percent and 88 in 1996, with a gender gap of 11 percent.[6] Comparing these figures with intake figures it appears that rates of enrollment are decreasing slightly.

Children reaching grade five

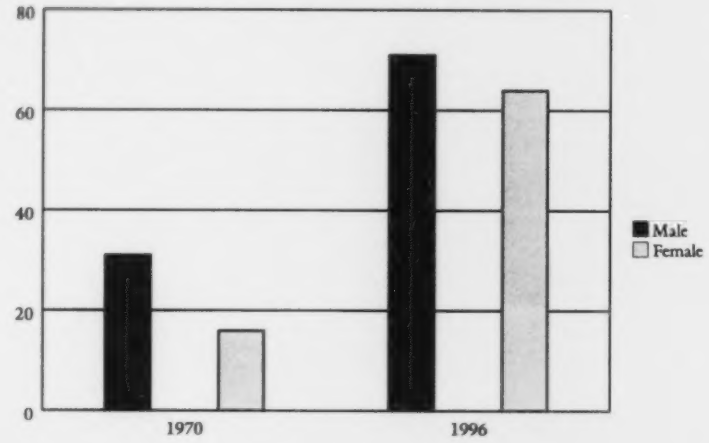
Virtually all children (98 percent of males and 97 percent females) who enter first grade are reported to reach grade 5, the last year of the primary level. Those survival rates were lower in 1970 and in 1981.

Secondary

The gross enrollment rate in secondary rose from 38 percent for males and 19 for females in 1970 to 80 percent and 70 percent in 1996 with

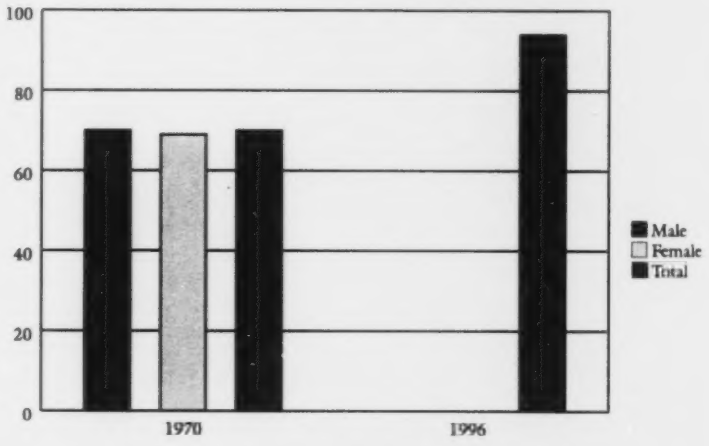
[6] The net attendance rate at primary—a possibly more accurate figure based on enrollment of age group taken from household surveys—was 83 percent for boys and 72 percent for girls.

Fig. 4: Net Secondary Enrollment Ratios (%), Egypt



Source: unescostat.unesco.org/en/stats/stats0.htm

Fig. 5: Transition Rate, Primary to Secondary (%), Egypt



Source: unescostat.unesco.org/en/stats/stats0.htm

a gender gap of roughly 10 points. The net enrollment rates in secondary rose from 31 percent for males and 16 percent for females in 1970 to a large gain of 71 percent and 64 percent in 1996 with a gender gap of 7 percentage points

Transition rates

In 1975, the girls' transition rate (69 percent) from primary to secondary was virtually the same as boys (70 percent) and by 1981 (when figures are available) it was 94 percent for all children. This means that children who complete primary are very likely to continue on to the preparatory level.

Repetition

Repetition rates vary year by year partly as a result of policies that discourages repetition in some grades. In 1970, girls were repeating at higher rates (6 percent) than boys (4 percent), but by 1996 the girls' rate was 5 percent and that for boys' 8 percent.

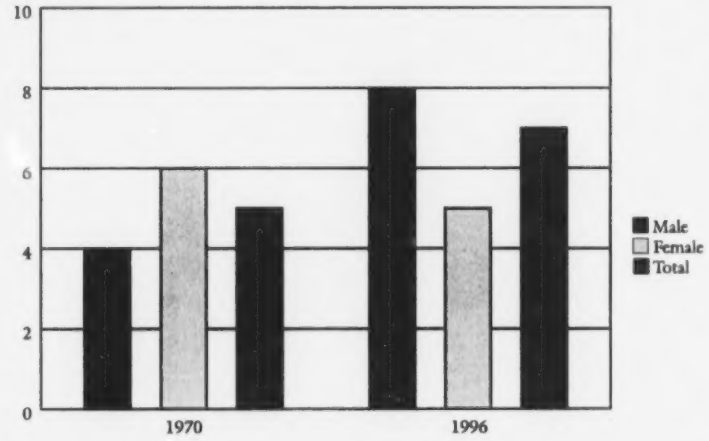
School expectancy

In 1970 males who entered school could be expected to stay in school 8 years and girls 5 years. By 1996 the figures were 12 and 10 years.

Median years completed

In 1992 the median years of schooling completed by Egyptians age 15–19 was more than four for boys and four for girls (World Bank

Fig. 6: Percent of Repeaters in Primary, Egypt



Source: unescostat.unesco.org/en/stats/stats0.htm

report, On-line, www.worldbank.org/research/projects/edattain/edattain.htm).

Overall gender gaps at primary, secondary, and even university level remain fairly consistent (around 10 percent). This gap may reflect a resistant group that, for socioeconomic reasons or because education returns are so low for girls in some regions, are difficult to attract to schooling programs. Those girls who go to school are as likely as boys on average to stay in school and continue on to the next level.[7]

Girls' issues

Studies in 1994 of trends in girls' participation showed that their previously rising rates of enrollment had leveled off, leaving a difficult-to-reach, resistant group of out-of-school girls (see MOE and Spratt 1994, and Fergany et al. 1994). It is possible that the persistent 10 percent gender gap noted above at all levels of the education system reflects this group. Fergany et al. (in Ridker 1997) sought to find out why primary school indicators were declining. At issue was whether the responsibility lay in individual and family characteristics—specifically, the poor economic conditions since the early 1980s, or whether it was poor school quality. An earlier study by Swanson (1987) had claimed economic conditions were to blame while a study by Hanushek and Levy (1994), using the same data as Swanson, found school quality had a significant effect on attendance once socioeconomic differences were controlled for.

Hanushek and Levy 1994 concluded that the equity-quality tradeoff issue was misstated. If school quality were improved, they argued,

[7] It is interesting to note that educating girls is slightly less costly than educating boys because of their greater persistence. MOE/Themme 1992 found in a sample of government primary schools that to produce a primary graduate took 6.2 years for boys and 6.0 years for girls instead of the 5 years expected.

attendance and completion would follow. They found that a student attending a higher quality school tended to stay in school compared to one in a poorer quality school. If all students attended the best quality school of their sample, the dropout rate would decrease by two-thirds or more. They found that one year in the best school would be the equivalent of more than two years in the worst school in terms of achievement gains.

> The quality of schooling in Egypt is more important for students with lower rather than higher socio-economic status. (Loxley 1983)

Fergany et al. (1994) showed that the largest numbers of out-of-school children were found in rural Upper Egypt (especially among girls), three governorates of Lower Egypt (Beheira, Daqahlia, and Sharquiya), and in some urban areas of Cairo, Alexandria, and Qalubia. The gender differential in enrollment, however, was essentially a rural phenomenon (in 7 out of 8 urban locations, girls' net enrollments were higher than those of boys). Completion rates did not necessarily follow the same pattern (they were highest in Cairo and in some poorer areas): overall girls' completion rates were higher than boys in 9 out of the 16 locations studied. They found that completion rates had also been declining rapidly over the previous few years. The study concluded that increasing the number of classrooms does not necessarily result in a proportionate rise in enrollments, especially in urban areas.

In another study Fergany et al. (1996) concluded that Egypt's centralized education system leads to little variation in the quality of schools compared to that found in individual households and communities, and consequently that if substantial improvements were made in the quality of school components, there would be a significant effect on achievement scores. He also found that poverty exerted no significant effect on cognitive achievement, but that an educated mother, a positive attitude towards girls' education, starting school early, and a school's high repetition rates do (Fergany et al. 1996).

A recent study of over 9 thousand adolescents sheds light on several of these issues. Ibrahim et al. (2000) report that,

> Egypt's dream to achieve universality of education has been partially fulfilled in the primary stage. Enrollment rates in primary schools among boys and girls in the urban governorates and urban Lower Egypt and also among boys in the middle socioeconomic categories are above 95 percent. (62)

The report goes on to say that the gender gap in the primary stage is largest among girls from low socioeconomic background and in rural Egypt. The situation at the preparatory level is different. There the

gender gap favors girls in urban areas of Upper and Lower Egypt. In other words, boys in these areas drop out at higher rates than girls. Only in rural Upper Egypt are boys' dropout rates lower than girls', which when added to the fact that they are more likely to have enrolled initially makes their participation rates substantially higher than girls in this region.

> In Egypt a better-educated (more than minimum literacy) parent improves the chances for children's initial entry into school and their cognitive achievement but not necessarily completion. (Fergany et al. 1994, in Ridker 1997)

Ibrahim et al. also noted that enormous gains have been made in school continuation. In her sample, 88 percent of 15 to 16 year olds in the urban governorates and in urban Lower Egypt were still enrolled in school. Rural Lower Egypt showed the greatest pace of increase between 1983/84 and 1996/97 of 2 percent a year (compared to roughly 1.4 percent for the others).[8] Upper Egypt in both urban and rural areas was characterized by year-to-year fluctuations and no clear trend.

Dropout rates tended to decline with each cohort, especially among girls, and groups in lower and middle socioeconomic levels and in rural areas of Lower and Upper Egypt. The rates stayed stable or fluctuated for boys and among those in urban areas (Ibrahim et al. 2000: 69).

Ibrahim et al. found that the three most important reasons female adolescents reported for never having attended school were the low value parents placed in education (47 percent), the low economic level of the household (44 percent), and the need for girls' help in household chores (16 percent). The comparable numbers for boys were 15, 51, and 1 percent (Ibrahim et al. 2000: 78). In other words, these reports show a much lower value placed on girls' education and a higher value on their household labor when compared with boys. Boys' education, on the other hand, is equated more consistently with employment opportunities.[9]

School entry for girls was particularly sensitive to contextual factors and especially to fluctuations in the economy. The two girls' cohorts with substantially less participation were ones that would have entered in 1987/88 when structural adjustment and economic reform measures including the reintroduction of school fees were implemented, and during 1990/91 when many Egyptians working in the Gulf States returned home because of the Gulf War. Boys from low income families also suffered from these factors (Ibrahim et al. 2000: 66).

[8] Interestingly this was the time when USAID-supported schools were coming online in increasing numbers.

[9] Parents saw the value of education to be employment for boys (62 percent) and for girls being a better mother (48 percent) and dealing better with life (41 percent). Adolescents however were split fairly evenly on the value of education: 42 percent said it was to gain social status, 37 percent to gain skills, 33 percent to deal with life's problems, and 32 percent to find a respectable job (Ibrahim et al. 2000: 88).

The main reason reported for dropout on the other hand was "poor scholastic performance" for boys (41 percent) and girls (35 percent) in all urban/rural, regional, and socioeconomic groups of the study. The second reason was "low interest or value in education" (20 percent for both). The third reason for girls (14 percent) and fourth for boys (10 percent) was economic level of household. (Surprisingly, only one-tenth of those dropping our named the economic factor). The fourth reason given for girls (12 percent) and the third reason for boys (19 percent) were school-related (dislike of school and harsh treatment by teachers). A final factor that was more important for girls (8 percent) than boys (2 percent) was "family reasons." Work and marriage were rarely stated as reasons for dropout. The authors believe that those who dropped out for other reasons may then have considered these options, but did not drop out because of them (Ibrahim et al. 2000: 73).

The study also measured achievement on standardized tests and asked adolescents about their experience in passing exams. Girls were more likely to have always passed exams (61 percent) than boys (54 percent), as was the case for high socioeconomic (72 percent) as compared with low socioeconomic groups (50 percent), and urban (60 percent) as compared with rural groups (55 percent).

Achievement scores were reported in terms of relative rather than absolute performance (which might have shed light on program quality). Girls and boys achieved similar rates of "good" and "poor" results in Arabic, while high and low socioeconomic and urban/rural groups achieved in expected directions with gaps of 10 and 7 percentage points. In math, boys did only slightly better than girls, and again high socioeconomic level and urban residence were predictive of higher scores. Large gaps in achievement existed between inschool children and dropouts (Ibrahim 2000: 80–82).

The Ibrahim study confirms several of the findings of the 1994 Fergany study, which found more than one-third of children dropping out for reasons of failure and poor achievement, and just under another one-third because they disliked school or were mistreated by the teacher. Girls' achievement rates in the Fergany study, however, were higher than those of boys in math, reading, and writing in urban areas, and lower in reading and writing in rural areas where he felt gender biases meant they received less reinforcement. Overall, the average math score was only one-third and the reading and writing score only one-half of mastery. Between 1988 and 1993 the average scores declined 25 percentage points in reading and writing and 20 percentage points in math. The decline was greatest in rural areas. Although girls' initial primary enrollments and completion rates were lower, they did not perform less well than boys nor did poorer girls perform less well than

richer ones (Fergany et al. 1994). MOE statistics similarly found for 1991/92 and 1992/93 that girls' fifth-grade and third-year preparatory pass rates were higher than boys' rates in most governorates. And Loxley, as far back as 1983, found that girls outperformed boys on achievement tests.

Although Egypt has made many advances in the last decades in expanding opportunities for girls, the Ibrahim study highlights some important remaining areas of weakness. First, for the resistant group of never-enrolled girls, the personal returns on education do not appear important enough for parents to expend resources or give up the household labor of girls. Second, once girls are in school two-thirds say they drop out as a result of factors related to the school—poor performance, low interest/value in school, and dislike of school. By comparison, outside factors (economic level and family reasons) only account for roughly one-fifth of reasons given for dropout. Putting these two points together, one would have to believe that Egypt's schooling program—for whatever reason—is responsible in large part for not attracting or holding on to the out-of-school children. It appears most at fault among those who are already disadvantaged, e.g., girls, the poor, and the rural.

Interestingly, however, although economic level was cited in less than half of the non-enrollment cases and a little over one-tenth of the dropout cases, it nonetheless features as a contributing factor in all the behavioral measures of schooling participation and achievement, and may be a particularly important factor for girls if parents are less likely to see value in their education. One would need to look closely at whether these behavioral outcomes are not more suggestive of "real" constraints than the interview reports. Again, one must return to Filmer (1999) who believes wealth differences have the most pervasive effects in developing countries. Fergany's findings also apply when he says the uniformly poor quality of Egyptian programs means background characteristics have a more predictive effect upon outcomes than teaching/learning.

> Since the 1980s in Egypt children's SES context variables have had a significant effect in determining enrollment and completion levels. Other significant factors include their involvement in child labor, their poverty, having a better educated mother (affects enrollment), a favorable attitude towards girls' education, private education (affects completion), regular attendance and liking school (affects completion). (Fergany et al. 1996)

What are some of the real costs Egyptian families face in educating girls? Many have pointed out that Egypt's free schooling is not, in fact, free, and that costs have increased substantially in the last two decades. Expenses include fees, uniforms, books, supplies, and tutoring that in total are daunting to poor parents. The 1981 Education Law in a cost-recovery attempt

permitted school authorities to levy payments on parents for "additional services," which escalated costs even further (and preceded the declines in participation noted above). Cardiff (1997) found that school costs continued to increase; in 1995 urban parents spent roughly 15 percent of their income on education, and rural parents about half that amount. Expenditures rose with parents' educational level and decreased as a per-head cost as the number of school-age children in the family increased. Costs varied from LE 251 per child (one student in the household) to LE 133 per child (in 6 student households). Fergany et al. (1994) found the average cost per primary child in Minya was LE 132, while in Cairo it exceeded LE 500. Moreland (1996) found expenditures per enrolled child (all levels) averaged LE 422, and found no gender differential.

One of the more expensive costs of schooling is tutoring. Private tuition in after-school hours had assumed epidemic proportions by the 1980s and was becoming prohibitively expensive for many parents. Alarmed at the high cost of tutoring and a concomitant deterioration in classroom instruction, the MOE sought to ban the practice. When the ban did not work, the MOE tried to regularize the process, with Decree No. 211/1993 allowing schools to organize annual payments for group tuition and other expenses. By 1996, Hua (1996) found two kinds of "special" tutoring in effect: private lessons, and inschool group tutoring. Individual schools tended to have either high or low use rates for these types of tutoring. The higher the socioeconomic status of the families, the greater the use of tutoring. A NSTP study showed that 54 percent of grade 5 students used some kind of supplementary tutoring to boost their achievement in one or more subjects.

The amount parents spend on tutoring varies considerable. An MOE study found that the least amount of money was spent on inschool tutoring per child (LE 192) in government as opposed to private schools (LE 387), while the amount of private out-of-school tutoring doubled for government students (LE 376) and more than tripled for private students (LE 1,365). Fergany (in Ridker 1997) showed that private tutoring or participation in inschool tutoring increased the chances of primary completion but did not significantly impact cognitive achievement, a finding that suggests coercion in the process rather than need for special help. He also noted that school quality had deteriorated over time, partly as a consequence of this tutoring system (Ridker 1997: 4). These cost data suggest why levels of participation may vary among socioeconomic groups, with the poorest finding it difficult to sustain the costs of schooling, and the unmotivated (as may be more the case with girls' parents) not wanting the continuous drain on the pocketbook.

The inferences to be drawn from these studies about girls' schooling, directly or indirectly, seem to be three: that most out-of-school girls are confined to specific groups and regions, that the poor overall quality of the program may be hindering their participation, and that (despite what the respondents report) socioeconomic level has important ramifications for girls' and boys' participation and skill attainment.

Initiatives to expand opportunities

Most assessments of educational participation in Egypt feel there is need for more accessible opportunities to achieve universal enrollment.[10] Toronto (1990) notes that educational planning as it is carried out in the MOE is "primarily a matter of determining and satisfying the need for classroom space throughout the school system" (34). The need ranges from an absence of schooling opportunities in some areas to overcrowded or substandard, poorly maintained schools in others.

This case study describes several Egyptian efforts in the last two decades to expand schooling opportunities for primary-age children. The description begins in 1979, some 27 years after Egypt's independence, when the new Egyptian government promised universal education for all its people. Efforts previous to 1979 centered on providing schools in cities and towns and a few large rural settlements near urban areas or major roads.

The survey of basic education in Egypt, 1979

At the request of the MOE in 1979, USAID sponsored a survey of basic education in Egypt to identify the constraints in implementing basic education (a United Nations' initiated concept that was fairly new at the time) and to recommend courses of action to improve the effectiveness and efficiency of the existing education system, including actions that might be funded by donors.

In 1979 Egypt was more rural (56 percent) than urban (44 percent). The survey calculated that roughly 90 percent of urban children of the relevant age group were in primary school compared to only 62 percent of rural children. For girls alone, 86 percent of the urban age group and only 46 percent in the rural areas were in school compared to 94 percent and 75 percent for the relevant groups of boys. At preparatory, the comparable numbers were 79 percent of urban boys and 70 percent of rural boys, compared to 68 percent urban and 33 percent rural girls. It was estimated that 4.3 million of the 6.3 million 6- to 12-year-olds were enrolled in all primary grades while roughly 78 percent of 6-year-olds were enrolled in the first year. Almost half a million students

[10] Emphasis has favored expansion over quality despite evidence of poor achievement as noted in the section above.

completed primary that year and of these, almost all (98 percent) entered preparatory level, where approximately 60 percent of the age group were attending. This still left approximately 3 million children between the ages of 6 and 15 out of school.

The survey team recommended a broad range of actions for the education sector as a whole, including increasing school construction (no school buildings had been constructed since the 1960s), emphasizing female enrollment, strengthening preservice and inservice training for teachers (especially rural female candidates), reducing schooling costs for parents and involving them more in the education process.[11] Most of the recommendations of the 1979 survey in one form or another have continued to be the components recommended with each assessment of the education system.

The survey report suggested that donor resources be used specifically to support, among other activities, pilot school construction and design, and the development of prototype basic education instructional models. In addition it called for donors to strengthen research and development capacity and management, and to support decentralization efforts. The donors were to coordinate their initiatives with other nonformal community programs. Despite this broad range of recommended initiatives to improve the quality and quantity of education programs, USAID focused its earliest efforts narrowly on school construction and prevocational inputs.

The Basic Education Project (1981–1994)

USAID's main intervention was the Basic Education Project of 1981–1994, a $190 million (life-of-project) joint USAID-MOE initiative aimed at expanding enrollments among rural children, particularly girls between ages 6 and 15 in grades 1 through 9,[12] and at increasing the relevance, efficiency, and effectiveness of basic education.

Over the ten years of the project, USAID funded the design and construction of 1,949 rural schools (50 percent more than the targeted goal of 1,300) in rural areas where girls' enrollments were comparatively low, no schools were available, or where schools were incomplete or severely overcrowded. By 1990, USAID schools comprised about 13 percent of the total number of schools and school sections providing primary education. In addition, USAID supported the provision of instructional commodities for prevocational, practical arts courses from

[11] Others included providing prevocational skills training (a fundamental aspect of the basic education concept) and the workshops and materials required, better data collection, processing and analysis, research that addressed education problems, improved capacity to develop and produce instructional materials, and financial, administrative, and management reforms including decentralization of some authority to governorate and district levels.

[12] Most schools, however, were primary schools.

grades 5 through 9 to make schooling more attractive and relevant to children's daily lives. In this effort they distributed $20 million worth of equipment to 15 thousand schools, and supported training for 13,500 basic education teachers in their use.

The practical arts courses in the end were found to be ineffective: teachers tended to teach them "theoretically" rather than "practically," skill levels did not increase much, girls' were directed into home economics courses, raw materials were not available, and parents and teachers felt the courses detracted from the core "important" subjects. In addition, rural parents felt they were sending their children to school to escape "manual" work, and therefore preferred such practical training as typing, accounting, and other clerical skills, if these courses were to be given at all.

The BEP evaluation 1991

The 1991 BEP evaluation determined that the overall goal of 1,300 schools for the construction program in Egypt had been reached and exceeded, but that maintenance of the new schools had been a conditionality not met by the government. Crowding also remained a concern. By 1991 almost one-third of the new schools were double-shifting, and three-quarters were overcrowded.[13] According to the BEP report, primary enrollments increased significantly in Egypt in the decade between 1981/82 and 1990/91, especially in rural areas and especially for girls. In 1980, approximately 80 percent, and by 1990 more than 90 percent, of eligible children were enrolled in school—a 10 percentage point increase.[14] Female enrollment in rural primary schools increased from 35 percent (897 thousand) in 1981/82 to 42 percent (1.4 million) of total enrollments in 1990/91, an increase of 60 percent. In the same period, urban female enrollments grew by 26 percent while urban and rural boys' rates grew by 19 percent.[15]

At the preparatory level, female enrollment in rural areas increased from less than 30 percent (180 thousand) to 40 percent (700 thousand) of total enrollment, an increase of about 400 percent, at the same time that urban girls' rates doubled.[16] These figures show a very positive picture of enrollment increases in Egypt overall, and particularly for girls and rural children. The evaluation report also stated that during

[13] Schools were usually constructed in multiples of six classrooms. To be fair, it was difficult to anticipate demand in areas where schools had not existed before. Many schools were built according to a plan that allowed additional stories if demand increased.

[14] Gross primary enrollments (number of primary children in each grade divided by estimated population in that expected age group) showed in 1992/93, 98 percent boys and 85 percent girls enrolled. While these ratios are probably not reliable, they at least show the relative changes in successive years. The ratios peaked in 1990/91, dropped in 1991/92, and then in the following year rose to 1990/91 levels again. Even while the percentage of out-of-school girls is decreasing, the actual number of girls is increasing.

[15] In governorates where girls' rates had been lower from the beginning (Sohag, Beheira, Bani Swef, and Assiut) the rates grew at a much faster rate.

[16] In 1989/90, the MOE changed the primary stage to five rather than six years of schooling, causing a double cohort to move into the preparatory stage that year.

the same period "retention rates differ[ed] little between males and females in the first two years of primary school. However, in grade three persistence weaken[ed] resulting in losses of about 8 percent of both boys and girls in grade four" (4).[17] These important improvements in participation rates must be understood in perspective: they represent the improvements that occurred in all Egyptian schools and not just the 13 percent of schools built by USAID. During this period, motivation was strong for educating children and so trends already existed for increased participation.

Most of BEP support for improving program quality was provided too late for there to have been a major impact by 1991. Even so, much was accomplished in a short time in terms of strengthening the capacity of the MOE to begin addressing planning and quality issues.

Study of USAID contributions to basic education (1987)

An intensive study[18] of a sample of USAID and comparison schools was conducted between 1982 and 1985. The study provides detailed evidence of construction impact in the early days of the project. It compared 10 USAID schools with a matched comparison group of non-USAID schools. The schools were divided into "very rural" and "less rural" (based on relative proximity to a town or other population center). For purposes of assessing "real" impact, each of the schools was studied with the cluster of schools near enough to potentially affect its participation rates. This was necessary because the "new schools" often drew children away from other schools that would normally have accommodated them. "Real" impact was determined by identifying area trends, and extrapolating from them the extent to which enrollments exceeded expectations in the clusters containing new USAID schools as compared with the control clusters.

The study drew the following conclusions about the clusters containing USAID schools:

Grade 1 enrollments

The first year after the new schools opened, grade 1 enrollment increased an average of 41 students per site above the trend of overall increasing enrollments in the area as a whole and independent of new school construction (i.e., 18 percent over expected enrollments without the new schools). The second year added 30 students per site, a smaller total because of the smaller pool of eligible students by that time. In

[17] Figure 2.5 in the report seems to contradict this conclusion. The cohort followed between 1987/88 to 1990/91 has no dropout in grade 1. In grade 2, roughly 1 boy drops out for every 16 girls, in grade 3, 1 boy for every 1.6 girls, and then in grade 4, only one girl drops out for every 1.5 boys. Some of the difference can be accounted for by larger numbers of boys than girls, but not all of it.

[18] This Robinson et al. (1987-Final Report) "Study of USAID Contributions to the Egyptian Basic Education Program," was perhaps the most comprehensive effort to separate out the "true" impact of school construction on children's participation in larger catchment areas from trends that would have happened anyway.

years three and four, the numbers declined further to 29 and 22. Thereafter, increases only reflected population growth rates. Household studies showed that the major factors influencing enrollment in general and for girls in particular were distance, school crowding, economic level, schooling cost, perceived lack of relevance, and need for child labor.

Retention in grades 2 through 6

The first year of new school operation added 87 students (9 percent) per site in grades 2 through 6, and where new schools had been open for two years, 127 students (12 percent) were added per site. In the third and fourth years, an extra 104 (9 percent) and 122 (11 percent) persisted. These increases occurred above any increased retention that would have occurred independent of the project.

Target group participation

Higher enrollment increases in the first year after school construction came in the most rural sites (23 percent) compared with the less rural sites (16 percent), and among girls (23 percent) compared with boys (15 percent). In subsequent years the figures for girls and boys were 19 and 8 percent, 15 and 8 percent, and 9 and 7 percent. The increase in persistence of girls and economically disadvantaged groups in USAID schools was also higher than in comparable groups.

Efficiency

At the rates of repetition and dropout in the project schools, seven out of ten children would complete their schooling within the expected six-year period of primary, two would drop out, and one would repeat one or more grades. If the wastage rates could be halved nationally school space would be increased by the equivalent of 428 schools at the then current school size. The household survey showed that the main factors affecting dropout were school-related problems such as failed exams and physical punishment, grade repetition, gender-related customs about girls' roles and marriage, and economic reasons such as poverty, high costs of schooling, and the need for child labor.

Relieving crowding

The average per-site impact in reducing crowding was 99 students or 44 percent of the population of the new school. These students were ones who previously attended a nearby school before the new school opened. In leaving behind vacant places, it was possible in the related schools to enroll more "new" students (included in figures above), or to leave classes less crowded.

This evidence demonstrates without a doubt that the new schools had a significant impact on participation levels of targeted groups in areas where they were constructed. And indeed MOE figures in the last five years of the 1980s, showed that the fastest growth rates for enrollment

were among rural primary (30 percent) and preparatory (25 percent) girls. As would be expected the construction was less effective in bringing in "new" enrollments in areas near population centers where schools existed before, but were simply overcrowded. By 1989 almost half the primary schools were still operating on more than one shift.

This intensive study raises a number of issues about calculating the impact of school construction. For example, should impact be measured by the increase in MOE capacity to enroll children or by actual enrollments? And if by enrollments, should the figures be per year or for the life of the school building? And should they be calculated assuming one, two, or three shifts of children? How are efficiencies such as school completion with fewer dropouts factored into the impacts? Should impact be measured as "new" enrollments that would not have occurred without the schools, or by all enrollments in USAID schools? And in the case of "new" enrollments, for how many years should the enrollments be measured since the number decreases over time? What year should be taken as the base year in an ongoing project, or, as the BEP evaluation did, should impact be measured as the total increase in enrollments in all of Egypt that occurred between the advent of the construction program and its end? If so, how should other variables be accounted for such as the increasing demand for education that was occurring in Egypt, or the effects of increased crowding in already existing schools? All of these questions are important in trying to determine the effects of construction on schoolgoing behavior.

After the Basic Education Project

Even with strong USAID support in the 1980s and 1990s, it is still not certain what portion of school-age children remain out of school. UNICEF's latest estimates from household survey data, suggest that the net primary enrollment rates are around 83 percent for males and 72 percent for females. In 1994, the MOE estimated that with then current class sizes, 35,825 new primary classrooms would be needed by the year 2002 or an increase of 23 percent from 1994 levels. Other projections suggest that full enrollment in grade one would not be achieved at current rates until the year 2012 (which implies even further expansion of the system).[19] This number of schools—equivalent to about six thousand six-room primary schools, is roughly the rate of classrooms produced by the MOE with donor assistance during the five-year period from 1984/85 to 1988/89 (if continued for eight rather than five years). Clearly Egypt has a need to expand opportunities, but whether construction is the most cost-effective way of addressing this problem has not been given serious attention.

[19] The World Bank suggests that the government aims to build 20 thousand schools by the year 2002 (from 1996). It says however that at its current rate of 1,500 per year there would only be 15 thousand (sic) schools.

Ministry initiatives

General reform initiatives

Twice recently the MOE has undertaken major reforms that have stressed expansion of opportunities. The major objectives of the first (1987/88 to 1991/92) were to expand access, improve quality, increase relevance, improve efficiency, and increase the mobilization of resources. In addition, the reform aimed at channeling many more students out of academic and into technical secondary schools at the end of basic education. Activities of the first five-year reform were to include:

- adding 27 thousand classrooms to the primary level, 19 thousand to preparatory stages, and an additional number to accommodate a reduction in shifts (USAID at the time was adding 1,800 classes annually);
- expanding the one-room school scheme (see below) in areas where population size could accommodate a full primary level;
- reducing the primary cycle from six to five years (implemented in 1988/89);[20] ;
- extending the school year (not fully implemented because new curriculum was late in coming and teachers were not trained to add more subject matter on their own);
- eliminating the third shift (single-shift schools had one-third more instructional time than double-shift schools), and reducing crowded classes on a school-by-school basis
- developing banks of test items, based on curriculum objectives rather than textbook material to replace preparatory and general secondary certification exams;
- abolishing automatic promotion from grades 2 through 8 and instituting twice-a-year testing with remedial work required for those who do not pass;
- requiring new primary teachers to graduate from four-year post-secondary programs, and utilizing old teacher training institutes for up-grading inservice teachers; and
- providing financial incentives for teachers and twice-yearly exams to discourage private tutoring.

Overall, though well intentioned, the first attempt failed to involve participants fully, and consequently many of the reforms were never completely implemented at the school level.

The second reform (1991–1996) was supported through an increase in the government's budget for education expenditures from 12 percent in 1990/91 to 19 percent in 1995/96. An evaluation found that overall

[20] Meant primarily as a cost-saving measure, this expected savings was less than anticipated, because rural schools, which were located far away from one another, were unable to consolidate efficiencies.

the government met its target of building 7,500 new and rehabilitating 3,500 old schools. Efforts were also underway to improve the quality of the program, which included cutting the number of textbooks[21] as well as their content, using student-centered approaches[22] in teachers' guides, lengthening the school year from 22–25 weeks to 34 weeks, and dividing primary into two stages (1–3, and 4–5). Other areas to be strengthened included teacher training, student assessment, continuous curriculum improvement, and management capacities. Semiautonomous organizations[23] were created to take a leading role in this second reform although, because they were new, it was difficult for them to play as an effective role as more mature units.

Expanding opportunities

In the 1990s, the MOE supported several innovative initiatives to enroll hard-to-reach groups and to supplement its own and USAID-supported new school construction. The two most important were the One-Classroom Schools and UNICEF-supported Community Schools.

One-classroom schools

The MOE's One-Classroom Schools initiative was relaunched (the system existed previously) in response to calls at the Summit of the Nine Most-Populous Countries in Delhi in 1993 to expand education opportunities. Ministerial Decree No. 255 responded by calling for building three thousand one-room, multigrade primary schools without fees for girls 8–15 (older girls were given preference). The schools were built in areas where no primary schools existed closer than 4–5 km. The staff consisted of local female teachers who were given an extra LE 40 a month as an incentive. According to the capacity of the child, the five-year primary course might be reduced to three years. Graduates were to be given a certificate equivalent to a primary education, which made them eligible to enter the preparatory stage. The course normally continued for 34 weeks and was similar to that of the formal system, but offered more flexible scheduling. Course content consisted of basic literacy and numeracy, plus some prevocational classes. The teachers were not trained however to deal with the conditions of multigrade teaching, nor did they have instructional materials suitable for teaching in these settings.[24]

[21] The method of preparing textbooks also changed and competitions were announced for submission of texts by academicians for review by a committee chaired by the Minister of Education.

[22] The BEP evaluation commented that these approaches were unworkable under the crowded conditions that existed in government schools.

[23] These included the newly established Centers for Curriculum and Instructional Materials Development (CCIMD), Technology Development, and Educational Evaluation and Testing (NCEEE)

[24] The Learnlink project was supposed to develop multigrade materials and methods for use in these types of schools.

Although the one-room schools made it possible for a number of girls to study who would not otherwise have been able to do so, critics observed that the schools enrolled very few children (officially seven per grade level, 35 in all), and therefore often did not sufficiently meet local need for schooling. The prevocational courses reduced the time for core courses and led to deterioration in literacy skills. The elaborately constructed schools also proved expensive as a model for rural delivery. Few girls moved into the formal system after completing these schools, often because they were overage by the time they graduated. Fergany et al. (1994) concluded that the model produced lower-quality education than the formal system.

UNICEF-supported community schools

UNICEF and the MOE signed a cooperative agreement in 1992 to establish community schools in rural areas of Sohag, Assiut, and Qena in Upper Egypt where there were low female literacy rates. The aim of the project was to develop an effective sustainable basic education program focusing on girls and serving small, rural communities where primary schools were either absent or some distance away. The program aimed at providing a full primary education with facilities and other support provided by the community. A committee of elders oversaw repairs and renovations to the school building and decided local policies. A group of mothers or students ran an income-generating project to help families of students in need. Teachers were selected from the local area and given training by Assiut University professors in modern methods for teaching multi-age (and since 1995 multigrade) classes. Curriculum was based on guidelines provided by the MOE but adapted to the conditions and needs of rural locations. By 1995, 38 community schools were in operation, and by 1997 almost 200 schools.

Some features of the community schools that support the aims of girls' education are:

- the intention of enrolling more girls than boys, starting with older girls;
- minimal cost schools located near students' homes;
- student-centered, multigraded learning approaches;
- high student achievement on MOE exams;
- older children completing primary studies in only three years;
- local female facilitator-teachers (though less qualified than MOE teachers, they produce better learning results);
- low dropout, and high attendance of children and teachers;

- school scheduling that meets the needs of the community; and
- community involvement and support.

Evaluators for the most part have considered the community schools a success, particularly after these students attained higher pass scores on grade 3 midterm exams (100 percent in 1994) compared with students from the conventional system (67 percent).

The issues raised about this model (some of which are being addressed), mostly relate to bringing it to scale and sustaining it. They include:

- the higher cost of the model (proponents say that since it serves remote areas and lower SES students, it should cost more);
- the small number of children served in each school (30–35 in each 5 year cycle);
- the intensive, lengthy training needed for teachers;
- the cost of continuous high-quality management and supervision;
- the difficulty in finding inexpensive, suitable facilities;
- maintaining community interest and continuing to meet wider education needs;
- problems that graduates face in entering the preparatory stage; and
- replication without losing the essence of the approach.

With the advent of these two systems—the Community Schools and the One-Room Schools, the MOE created a separate Department for Small Schools within the Ministry to manage and deal with the special issues that these schools raised. In 1995 an Education Innovations Committee chaired by the minister of education was established to determine how to support and expand effective innovations of this kind. A new community schools initiative was planned with facilitation by NGOs to establish schools in low literacy governorates. This effort which relied heavily on community support in providing physical facilities was later abandoned in favored of the more conventional approach of constructing classrooms (with donor support).

Other nongovernmental programs to expand education for girls

There are a number of other nongovernmental organizations that have also expanded opportunities for disadvantaged groups including girls. Three of the many examples are given here.

Assiut and Sohag Community Development Associations (CDAs)
The Cairo Social Fund for Development (SFD) has supported, and UNICEF has worked with, regional NGOs (the Sohag Development Association and the Upper Egyptian Association) to expand the community school model. UNICEF has provided furnishings, equipment, supplementary instructional materials, teacher training, and technical support, and the CDAs have worked with local communities to encourage self-help in establishing schools.

Inter-Agency Collaborative Program for Basic Education and Female Literacy (NCCM)
Started in 1992, this program was jointly funded by multiple donors including the UNDP, UNICEF, World Bank, etc. It targeted girls (and boys) under age 14. The aim was to help local NGOs provide basic education with added vocational and income-generating projects that enable children to either continue in or re-enter formal education. The aim was to eradicate literacy in 100 thousand women and provide literacy programs for five thousand out-of-school boys and girls.

Association of Upper Egypt for Education and Development
The Association is a local NGO founded by a Jesuit priest, Father Ayrout, in 1941 to provide education for children in the poorest regions of Egypt. The Association provides free primary education for over two thousand students in Cairo, Minya, Assuit, Sohag, and Luxor. The proportion of female staff is now 80 percent, and female students constitute 44 percent of total enrollment, which is high for the conservative areas of Upper Egypt where the NGO works. Two-thirds of its schools have kindergarten classes and a number (20 of the 37 in 1994) have parallel schools which teach basic literacy to women.

Summary and conclusions

Over the last two decades, Egypt's Ministry of Education has focused much of its budget and attention on school construction in an effort to keep pace with growing numbers of school-age children. All signs are that the effort has been successful in enrolling a large proportion of Egypt's primary-age children. However, no one has accurately estimated the tradeoffs that have occurred in declining program quality and in the inability to reach children whose circumstances are not amenable to such costly interventions. The need for more schooling places will continue at "emergency" levels as long as the focus remains on the construction option. It is a problem that at present and future rates of estimated increase promises to use up the large share of future education budgets.

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The lesson to be learned from Egypt is that although construction does expand participation, the price paid in insufficient attention to program quality reduces the impact of schooling on primary participants, especially on those who have the most to gain from the benefits of high quality education: girls and the poor. Some researchers believe that low program quality may be contributing to recent declines in participation, or at the very least to a resistance from those who do not see sufficient benefits in education to offsets the costs. The fact that the most significant reason reported for dropout is poor scholastic performance suggests that program quality must be on the reform agenda if the aim is to help children complete the primary level.

The current issues of most importance in Egypt, all of which, while affecting both boys and girls, affect girls more seriously, include:

- **Keeping up with population growth and relieving crowding in existing schools.** Failure to solve these problems will result in children being denied admission or being encouraged to leave school prematurely.
- **Reaching remaining out-of-school children.** These "resistant" groups may need more flexible delivery options than costly construction to attract them.
- **Improving program quality.** There is no point in providing access to education opportunities if children do not learn. Hanushek and Levy (1994) have shown clearly that a policy of expansion at the expense of quality may never yield the returns expected by standard rate of return estimates. They say unequivocally that if non-completion is a concern the best way to deal with it is through school quality improvement.
- **Utilization of resources.** Egypt's capacity to support universal basic education has increasingly come under pressure. Serious thought needs to be given to how education programs can be delivered more inexpensively, and which are the most cost-effective ways to accomplish this aim.

In terms of relative investments, construction may not be the wisest alternative given the poor quality of schooling programs. Outside of the community school initiative, however, little attention has been focused on finding less expensive ways to deliver education. The answer to this question—which has cost implications for parents as well as for the government, will have major implications for the participation of Egyptian children in the future.

Honduras: Second-chance primary schooling

Introduction

The Republic of Honduras occupies a strategic location in Central America between the Caribbean Sea on the north and the Pacific Ocean on the south. On the west is Guatemala, the southwest El Salvador, and on the east and southeast Nicaragua. In this location, Honduras has been subject to the effects of its neighbors' political turmoil as well as to hurricanes and flooding on the Caribbean coast. As recently as 1998, a major hurricane, Mitch, caused severe damage to its economy—especially the important agriculture sector—and worsened its short-term economic prospects, which up until then had been promising. Before the storm, the country had been pursuing an economic reform program and was showing strong annual growth.

Honduras has a long history that is thought to have started when Mayan Indians settled in western Honduras around 1000 BC. Their network of cities grew and flourished until it collapsed in around 900 AD from what is believed to have been the consequence of deforestation. Columbus is thought to have been the first European to land on the territory in 1502. The population, estimated at from 500 thousand to 1 million people at the time, was reduced by 95 percent within the first 100 years through disease and the ravages of slavery, and only reached preconquest levels in the nineteenth century. The Europeans introduced new plants, animals, and mining techniques, in addition to cutting forests and developing large ranches and plantations. The ancestors of the early Mayans (called Chorti Mayans) are still today trying to regain lands lost during the European conquest.

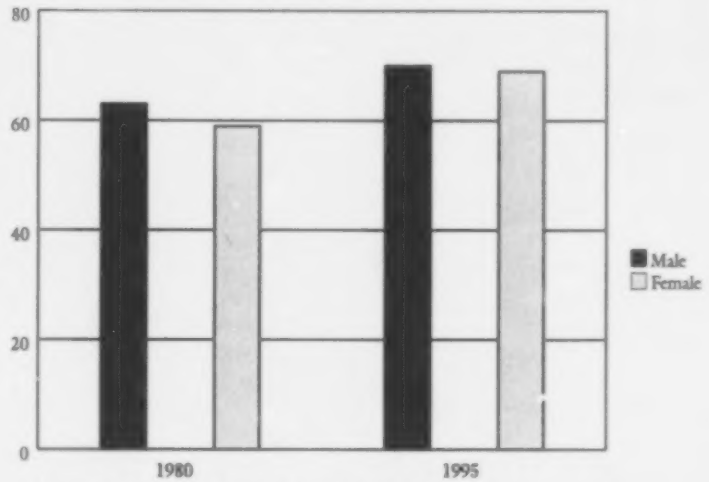
Honduras eventually gained its independence from Spain in 1821. In the early twentieth century, outsiders saw an export potential in bananas, and bought up nearly 75 percent of the country's production with the help of corrupt local politicians. Bananas remain the second most important export next to coffee, but while still important to the Honduran economy, this export commodity has not been sufficient to raise its overall development ranking from one of the lowest in the Western Hemisphere. The country has been trying to diversify over the last decade by establishing factories that assemble goods for the export market such as electronics and clothing and by encouraging the expansion of tourism. The low wages of Honduran workers attract foreign investment.

The country is divided into contrasting coastal ecosystems on the Pacific and the Caribbean by a volcanic range that runs down the Central American Isthmus. The valley is divided further by three mountain ranges in the interior: one along the Nicaraguan border, one along the northern coast and one that divides the *Olancho* department from the Caribbean. The mountains in the interior rise to almost 3,000 m in some areas and are subject to frequent, but usually mild, earthquakes.

There are eight distinct ecosystems varying from humid tropical forest through dry tropical forests to humid montane forests. The country possesses great natural beauty as well as natural resources that include timber, gold, silver, copper, lead, zinc, iron ore, antimony, coal, and fish. Forests and woodlands compose over half of its roughly 112,000 km² (the second largest nation in Central America). Only 15 percent of the land is arable, and less than 1 percent is irrigated. The chief industries are sugar, coffee, textiles, clothing, and wood products, and the main exports bananas, coffee, shrimp, lobster, minerals, meat, and lumber. The largest portion (61 percent) of GDP is derived from service industries.

Honduras is one of the poorest countries in Central America with an economy still based largely on agriculture.[1] Its population of over 6 million earns a per capita GNP (1997) of about $740 (compared to $3,900 for Latin America as a whole) with over half the population falling below the poverty line (although because of the rich agricultural land, few go hungry). The labor force of 1.3 million is primarily engaged in agriculture (37 percent), services (39 percent), and industry (24 percent), with about a third underemployed, and over 6 percent unemployed.

Fig. 1: Adult Literacy Rate (%), Honduras



Source: unescostat.unesco.org/en/stats/stats0.htm

Although it has made progress in the last decades, Honduras lags behind the average for Latin American and the Caribbean in most indicators. In 1980 the adult literacy rates for males were 63 percent and for females 59 percent. By 1995, 70 percent of males and 69 percent of females were literate, well below the regional average of 86 percent. About one-third of the labor force claims to have had no schooling at all.

The under-5 mortality rate in 1960 of 204 (compared to 154 for the region) had decreased by 1998 to 44 (compared to 39 in the region). A life expectancy of 70 years, a gross primary enrollment rate of 111,

[1] King and Hill (1993) define Honduras as a Group 3 (out of 4) country, along with Bolivia, El Salvador, and Haiti. In 1980 these countries had illiteracy rates of over 20 percent and some of the lowest GNPs in Latin America. These countries are comparatively less urbanized, women are less involved in the labor force, and more of their economies are based on agriculture.

and 11 percent of the population sharing the lowest 40 percent of household income are all indicators that approximate the regional rates. However 40 percent of Honduran children suffer from moderate to severe stunting compared to a regional average of 18 percent. Almost all Honduran children are immunized, roughly two-thirds of rural families have access to safe water, and more than one-half have adequate sanitation (all higher levels than the region as a whole). In providing health and other services, the government faces the difficulty of inadequate transportation and communication infrastructure. Only 105 thousand telephones were estimated to exist in 1992. There are only 600 km of railways and less than one-quarter of the 14,000 km of the country's roads are paved. Of the 122 airports only 11 have paved runways. The country has six ports and harbors.

About 90 percent of the people are mestizo—a mixture of African, indigenous, and Spanish. There are also small numbers of Europeans, Africans, Asians, and Arabs, and six main indigenous Indian groups: the Miskito, Pech, Chorti Mayan, Lenca, Jicaque and Tawahka. A final group are the Garifuna, a mixture of an indigenous tribe and local Caribs, Indians, or Africans. Most Hondurans are Roman Catholic, but there are also significant numbers of converts to Protestant sects. The Miskito Indians are usually Moravians, and that church has taken responsibility for providing assistance to their communities. Spanish is the main language, except in the area of the Bay Islands where English is the main language.

Since independence, Honduras has had almost 300 internal rebellions, civil wars, and changes of government. However, it now has a functioning multiparty democracy with a free press. For administrative purposes, it is divided into 18 departments or states, each with its own capital.

Education in Honduras

The structure of education

Primary education in Honduras begins for children at age seven and continues for six years. Secondary schooling ideally begins at age 13 and consists of two cycles—the first of three years and the second of two years. Primary schooling is compulsory and free from ages 7 to 12, but compulsory rules are not enforced, partly because there have not been sufficient schooling opportunities provided, especially in rural areas. Graduates of the compulsory stage have been expected in the past to teach two illiterate persons to read and write, although again this expectation has not been enforced.

The Ministry of Education is located in the capital, Tegucigalpa, and is responsible for administering and managing the school system for the country's 18 administrative departments and 281 municipal divisions.

In 1995, Honduras was spending 3.6 percent of GNP and 16.5 percent of the government budget on education. Both figures are lower than the average for the region as a whole. In 1996, pupil teacher ratios were 29 at the preprimary, 35 at the primary, and 20 at the secondary levels.

School participation

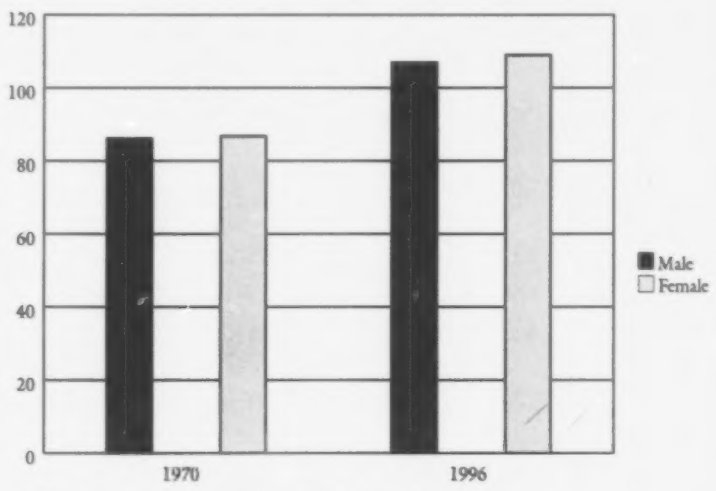
Preprimary enrollment

Honduras has several types of private, informal schools for preprimary children, usually called kinders. They may offer some instruction in the alphabet and numbers, or their purpose may be seen simply as teaching "the discipline of school." Although still low, gross enrollment rates at the preprimary level have nearly quadrupled, from 4 to 15 percent, between 1970 and 1995, with roughly the same participation rate for boys and girls.

Gross primary enrollment rates

At the primary level in 1970, roughly equal percentages of boys and girls were enrolled (86 percent). Over the next few decades, the gender gap favored girls by a small margin. By 1996, the rates were 107 percent for boys and 109 percent for girls.

Fig. 2: Gross Primary Enrollment Ratios (%), Honduras



Source: unescostat.unesco.org/en/stats/stats0.htm

Net enrollment rates at primary

Net enrollment rates are not available for most years, but where they are available, girls have small but consistently higher participation rates than boys. In 1980, the rates were 78.3 for girls and 77.6 for boys, and in 1993 91 and 89. Cuadra (1989) found that by compensating for schools' underestimated reporting of repetition rates, he could calculate more accurate participation rates of 28 percent of six-year olds in 1978 and 85 percent in 1984 (for more about this study see below).

Intake rates

The officially reported intake rates for grade 1 are extremely high (145 percent of the age-relevant group for males and 138 percent for females in 1980, and 135 and 131 respectively in 1993). By using more accurate methods to analyze school data from the 1980s, Cuadra (1989) suggests that official intake figures of 127 to 134 percent of the total

population of six-year olds should be reduced to figures of 77 to 94 percent (13).

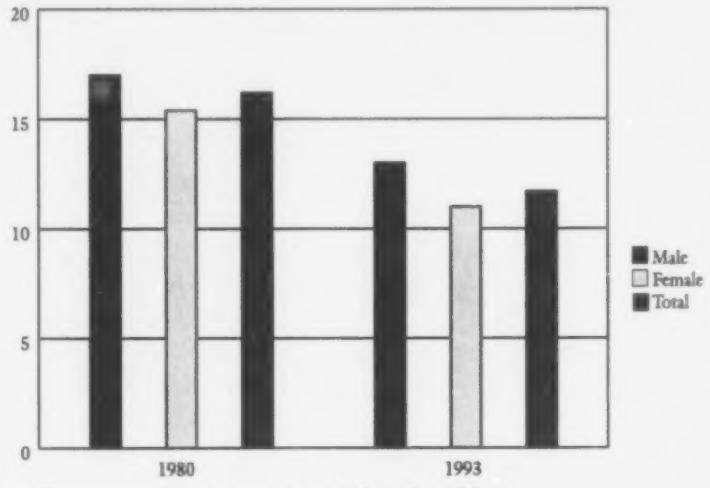
School expectancy

In 1984 (the last year sex-disaggregated data are available), 15- to 19-year-old males on average completed 8.7 years of schooling compared to females' 8.8 years. For as long as figures were available (1983–1991), the average total years remained virtually unchanged.

Repetition

Repetition rates in Honduras are fairly high and have been so for some time. In 1980, girls repeated at slightly lower rates (15.4 percent) than boys (17 percent) and remained lower during most years. By 1993, the rates had decreased to 13 percent for boys and 11 percent for girls. Repetition is high in all schools—especially in the early years of primary—but tends to be higher in rural than urban schools.

Fig. 3: Repeaters in Primary (%), Honduras



Source: unescostat.unesco.org/en/stats/stats0.htm

Completion (survival) rates

In 1983, about half of all children who entered school completed the primary level, with more girls (51 percent) completing than boys (45 percent). By 1993, roughly 60 percent of children who entered primary completed the stage (data are not disaggregated by gender).

Age-specific enrollment ratios

No data are available.

Transition rates

No data are available.

Gross enrollment rates at secondary

The enrollment rates at the secondary level are considerably lower than primary. In 1970, the gross enrollment rate was 14 percent for boys and 13 percent for girls. By 1996 the comparable figures were 29 percent for boys and 35 percent for girls.

Net enrollment rates at secondary

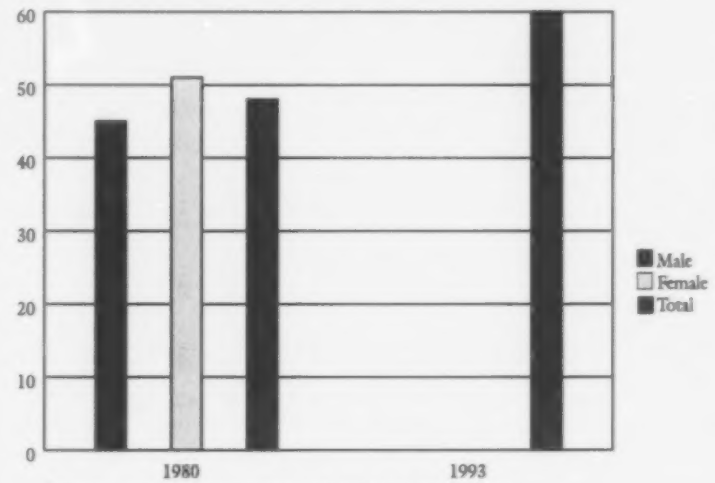
No data are available.

Girls' education issues

As in many countries of Latin America, education indicators in Honduras for the primary and even more for the secondary level show gender gaps that consistently favor females. Indeed, Honduras gives every appearance of having achieved close to universal levels of primary enrollment. However, inaccurate reporting of repetition and dropout may conceal lower levels of actual participation. Repetition is the main reason students leave school in Honduras before finishing the primary stage (McGinn 1992), and consequently it raises significant issues for Honduran educators. Important education issues for both girls and boys in Honduras are the high repetition rates—especially in rural schools—and the large proportion of children that drop out before completing the primary cycle.

Repetition and dropout rates are used to measure the internal efficiency of education systems. In an efficient system, each student spends one year in a grade. When this happens, resources can be used to educate a maximum number of children or provide a better quality program.[2] In Latin America, about 70 percent of students eventually complete the primary cycle, but about 44 percent repeat one or more grades. On average, students spend about seven years in school but only complete grade 4 (McGinn 1992: 8).

Fig. 4: Survival Rate in Primary (%), Honduras



Source: unescostat.unesco.org/en/stats/stats0.htm

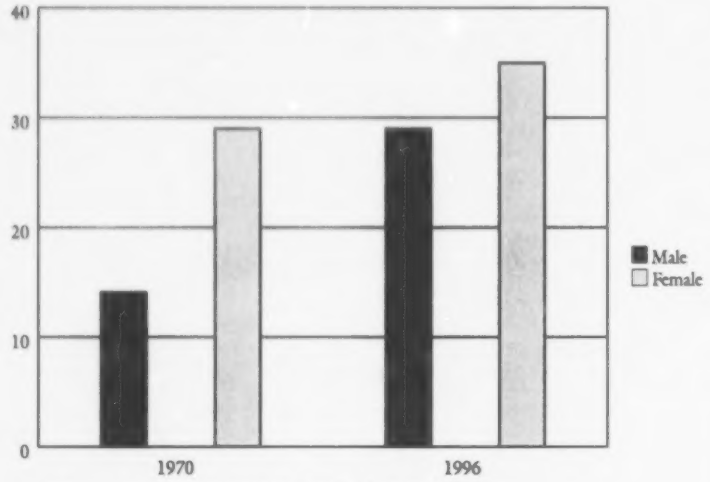
Researchers, noting what appeared to be abnormally high primary participation rates in Latin America, became concerned at how these figures might be distorted by the lack of accurate reporting on repetition and dropout. Consequently two BRIDGES studies were undertaken in 1989 and 1992 to look at the phenomenon of repeaters in Honduran schools. The first (Cuadra 1989) suggested that repetition was a more serious problem than dropout because repetition is usually higher in most grades and "clogs" the system, preventing many new students from entering grade 1. In addition, repetition is known to lead to dropout by discouraging children and their parents from educational participation. Finally, underestimation of repetition tends to cause educators to overestimate

[2] McGinn (1992: 7) shows a table of the average number of years it takes a student to complete the primary cycle. The numbers vary among the six-year primary cycle nations from a perfect six in Korea to at the upper end of inefficiency, 15 years in Mali and 17.4 years in Nicaragua.

dropouts since dropout rates are often calculated as the remainder after enrollment and repetition have been added. When repetition is underestimated a country may appear to be making advances in universal education when in fact certain children are only spending more time in individual grades (McGinn in Cuadra 1989: iii).

Cuadra provides several explanations for why teachers might be inclined to underestimate repetition, the most common being that they do not want to appear to be failing so many children. Schiefelbein (1975) found that in 14 Latin American countries, repetition rates were underestimated, which probably explains the very high—over 100 percent—primary participation rates found in those countries year after year.

Fig. 5: Gross Secondary Enrollment Ratios (%), Honduras



Source: unescostat.unesco.org/en/stats/stats0.htm

Cuadra suggests an age/grade method for more accurately determining repetition rates. He confirmed his method by finding that school records and parents' reports of children's repetition were very similar, and probably therefore fairly accurate, but were very different from "official" reports sent by schools to the MOE. He showed in Honduras, for example, how in 1986 as many as 45 percent fewer children were reported officially to have repeated grade 1 than was reported by parents—and for that reason the intake of primary school entrants (see above) appeared much higher than it actually was.

Cuadra also showed that another consequence of underestimating repeaters is that the number of dropouts tends to be overestimated. The conventional grade/retention method of calculating dropout rates showed higher rates in 1984, 1985, and 1986 (28, 37, and 47 percent respectively) than when school-record reconstruction methods were used (7, 10, and 15 percent), or parents' reports were compiled (4, 8 and 11 percent) (Cuadra 1989: 19). Though still high, these numbers are considerably lower than by conventional accounting. The implications for planning educational participation in Honduras or for understanding the magnitude of the repetition/dropout problem are significant. Using conventional methods for assessing participation, it is not possible to know when universal enrollment has been achieved or what proportion of the children entering grade 1 actually complete the primary cycle.

The second study (McGinn et al. 1992) investigated the reasons for repetition in a contrastive sample of high-promoting and high-repeating rural schools in Honduras. Researchers interviewed MOE officials, school directors, teachers, and parents to ask why they believed the rates were so high. As frequently happens, the respondents' answers tended to reflect their own interests and involvement in the education process. For example, MOE officials gave as a priority reason poor teaching strategies (71 percent), school directors and principals blamed family poverty (98 percent) and the use of children in work (80 percent), teachers blamed parents' lack of interest in schooling (53 percent) and student absenteeism (45 percent), and parents said students simply did not learn what they should have learned in school (55 percent).

The study also analyzed other factors that might have influenced promotion and repetition, and found no association with gender or race, and only a slight difference by age (older children were more likely to be promoted). There was no difference based on the children's physical condition or nutrition (as measured by height and weight), and when controlled for economic level no effect of whether they had participated in a preprimary program. However, the study did find that promoted students were more likely to have one or both parents able to read and/or to have parents with more years of schooling, a higher economic level, a mother that worked, fewer household members, higher household expenditure per child on education (mainly on a uniform), fewer absences, and lived closer to the school.

The study concluded that the critical problem facing rural schools in Honduras was repetition (not dropout, which was usually a consequence of multiple repetitions) and that the main determinant of repetition was failure to achieve the levels of learning believed by teachers and parents to be necessary for the next grade.[3] The study found that certain in-school factors affected achievement including the teachers' expectations about individual children's ability to learn which were colored by teachers' knowledge about children's family background, parental literacy, and their appearance (cleanliness, dress, and the wearing of shoes). Schools also varied widely in the amount of time provided for learning because of differences in length of the school day, the number of days in a school year, or because there were variations in the number of days teachers and students were absent. Whether classes were multigrade[4] (more repetition) or single-grade (more promotion) affected not only promotion but the relative impact of textbooks on

[3] See Ibrahim 2000, whose study of adolescent Egyptians similarly finds failure and poor learning as the main cause of dropout.

[4] An analysis by Reimers (1992) examining the contribution of multigrade education to the quality and internal efficiency in Honduran primary schools found that though repetition tended to be higher and the average achievement lower, more (67 percent) of the variation was due to differences in student background than to the type of classroom (33 percent). He concluded that children can learn just as much in these classes.

learning. In some cases, children repeated primary classes simply because there was no higher grade to attend in their incomplete schools and it was thought better for them to repeat a grade than to have no schooling at all.

Overall, parents usually accepted the judgments of teachers about the ability of their children to learn. Dropout occurred when students or parents decided it was more worthwhile for the children to engage in other activities—usually after one or more experiences of failure or anticipation of failure. Indeed, for rural children, each additional grade of schooling contributed less to their future earnings than for urban children, so the cost of schooling (in lost economic opportunity) mounted with each grade the rural child attended. The study stressed, however, that more students were pushed out of school by failure than pulled out of school by the attraction of economic opportunities.[5]

The study concluded that children repeated grades because they did not meet the expectations of their teachers and parents, and they left school when their experiences with failure and repetition convinced parents the children could not be educated. The major factor contributing to failure was low academic learning and the poor quality of the academic program (McGinn 1992: 3). In seeking solutions, the study shows, repetition does not help since repeating children tend not to learn the skills they did not learn the first time and they are more likely to repeat again than promoted students. As McGinn notes, "The students' failure to learn is a failure of the school, and to attribute failure to the students themselves is to blame the victim, and to lose sight of the purpose of schools" (1992: iii). The central education issue revealed by these studies for both girls and boys is the low level of academic learning in Honduran primary programs.

Initiatives

Introduction

A number of initiatives have been undertaken in Honduras to improve the qualitative and quantitative aspects of primary education. Here, however, we will focus on the efforts undertaken through radio instruction to increase the likelihood of primary completion. Interactive radio instruction, or IRI, has been used extensively in Latin America for various educational purposes[6] and therefore it is appropriate to use Honduras' experience as a case example for the region.

[5] Again, note that Ibrahim (2000) finds that although out-of-school Egyptian youth often work (boys) or marry (girls), the majority adopt these options because they have been "pushed" out of school rather than because they find these options attractive enough to "pull" them out of school.

[6] In Latin America alone the following interactive radio instruction programs have been developed: math or mental math in Nicaragua (1974), Bolivia (1987), the Dominican Republic (1993), Costa Rica (1989), Honduras (1987), Ecuador (1988), Haiti (1995), Guatemala (1990), El Salvador (1992), and Venezuela (1991); health in Bolivia (1992); early childhood development in Bolivia (1994) and Ecuador (1997); maternal child care in Bolivia (1997); community basic education in the Dominican Republic (1981); teacher training in the Dominican Republic (1993); English in the Dominican Republic (1997) and Costa Rica (1997); environmental education in Costa Rica (1991); adult education in Honduras (1992); Creole in Haiti (1995); civics in Haiti (1995); and Spanish in Guatemala (1990) and El Salvador (1996) (Dock and Helwig, eds. 1999).

IRI for primary programs

Among the efforts to remedy the problem of non-completion in primary education in Honduras have been two IRI programs, one aimed at improving the quality of math learning in the formal system and the other at serving the population of adolescents and adults who have not completed primary schooling.

An IRI primary math program: "The Numbers Family" (1987)

Math has been a particular problem for many Honduran teachers (as it tends to be with less academically prepared teachers all over the world). The McGinn study reported several pieces of evidence showing that teachers who were more likely to promote their students felt more confident in their ability to teach math. For example, students of "repeating" teachers reported that they were given more homework in Spanish, while students of "promoting" teachers reported having more homework in math. The teachers themselves reported giving more Spanish homework to students for whom they had lower expectations and more math homework to those for whom they had higher expectations. Teachers' expressed preferences for Spanish or math subjects broke down in the same way, based on whether they were more likely to repeat or promote students. Promoting teachers also tended to spend more time on core subjects including math, spending two hours more per week in grade 1 on math and one hour more in grade 3 than repeating teachers. This evidence suggests that weaker teachers (or ones having more repeating students) may have more difficulty with math concepts.

IRI is ideal for such situations where teachers are weak in either subject content knowledge or pedagogical technique. Radio is capable of delivering sound content in a format that models good teaching practice, while at the same time providing an opportunity for both teachers and students to improve their skills.

In 1987, with funding from USAID in support of the Primary Education Efficiency Project (PEEP), Honduras decided to develop a radio math program to strengthen its primary school curriculum.[7] At the time this program was unique for two reasons: it aimed to reinforce rather than replace existing primary-level math textbooks, and it was the first attempt to provide radio learning through public and private collaboration.

At first, it was intended that "The Numbers Family" replicate a Nicaraguan program developed in the early 1970s with the help of Stanford University educators. However that program was designed as a standalone math program without textbooks for the primary level. In Honduras, new textbooks were already being developed through

[7] This section summarizes the Honduras case study found in Dock and Helwig, eds. 1999.

PEEP and therefore it was important that the radio program parallel and support the instructional content in these books. The program became a prototype for other mental math initiatives established later in Costa Rica, El Salvador, the Dominican Republic, and Venezuela.

As part of the initiative, the private sector in Honduras was asked to support the cost and distribution of copy books for students, and an association of businessmen, AVANCE (Association for Socioeconomic Advancement and Development), with startup funding from USAID, was asked to provide space and to administer and find funding for the IRI program. USAID's Radio Learning Project (RLP) provided technical support. When the program was ready, teachers were asked to pay $45 for a package containing a radio, teacher's guide, and four large posters. Later, however, it became obvious that this seemingly small amount was difficult for teachers to afford, and there were equity issues of whether they should have been asked to support this cost at all, rather than schools or parents.

"The Numbers Family," consisting of 465 lessons, was broadcast daily to children in grades 1–3. By 1989, the lessons were reaching 180 thousand children. At the end of the first year, test results were compared for three groups of students—one using conventional instruction, one using the new math textbooks alone, and one using radio lessons in addition to the textbooks. Results showed that the conventional group had a pass rate of 38 percent, the textbook group 59 percent, and the IRI and textbook group 76 percent. These results demonstrated very clearly how radio can effect major improvements in the math learning of children in formal programs.

Next AVANCE developed an English-as-a-second-language course based on an IRI program in Lesotho, and later was able to market the program to neighboring Belize.

Although the two IRI programs were successful in meeting their academic objectives, they shut down because of difficulties in institutional arrangements, specifically with regard to public-private approaches to financing and differences over the role of USAID, AVANCE, and the MOE.[8] AVANCE was supposed to continue financing the broadcasting of the program, but was unable to generate the money to do so.

"Educatodos": An IRI adult basic education program (1992)

The second radio initiative[9] in Honduras was motivated by a growing worldwide interest in basic "education for all" and the subsequent local

[8] The MOE was unwilling to take on the role of contracting agency, and AVANCE did not see itself as a service agency, but as a commercial venture.

[9] Reported here from the LearnTech Case Studies Series, No. 9, Corrales (1995), *Adult Basic Education in Honduras*.

interest in providing educational opportunities for the large numbers of Honduran adults who had either been denied opportunities to learn or whose learning had been cut short before they completed the primary stage. The adult illiteracy rate in Honduras is about twice the average for Latin America as a whole and of the illiterate group 60 percent are between the ages of 10 and 29, i.e., within or just beyond schoolgoing age.

"Educatodos," a basic education program for adults, uses IRI along with textbooks to teach adults math, reading and writing, social science, science, business, vocational training, and elements of civics. The program, which is built on the experiences of the previous IRI math program, is interesting for several reasons. First, it was the first IRI initiative to take on the challenge of adult education in a developing country. Overall, these adult programs have had a poor success rate, often because materials have been inappropriate for their audiences, or because participants have had scheduling problems, time constraints, or lacked motivation to complete the program. Second, the funders and implementers of the previous IRI math program continued to search for effective approaches to public-private collaboration in financing. This time they relied on COEDUCA, a local NGO, with support from USAID's LearnTech project, to take the lead in developing the basic IRI program. The government supported most of the implementation costs and delivery was effected through community groups. Overall the institutional arrangements worked better, although some uncertainty still remains about the long-term sustainability of the program. Finally, the Honduran initiative was interesting because it sought to provide a cost-effective alternative course to formal primary education, one that could be completed in a shorter time but with the same, if not better, learning results.

The initiative was started in 1992 by the MOE, with technical assistance funded through USAID. The MOE supported the salaries of radio and administrative staff and the production costs of the materials. COEDUCA was contracted to write and produce the programs. "Educatodos" was based on the six levels of primary schooling. However, there were differences between this course and both the formal primary program and the existing adult education program. The course consisted of six levels (as in the formal primary system) rather than the four levels of the previous adult education program. Each level was made up of 100 radio lessons, broadcast at the rate of two levels a year, making it possible for participants to complete the primary cycle in three years. The content was based on an established set of minimum learning objectives (MLO) for the primary stage. Once participants

demonstrated through success on standard tests that they had mastered the MLOs, they could receive a primary school diploma. Another important change was that the focus audience for adult education became the younger 14- to 29-year-old group rather than the 35- to 40-year-old group previously targeted. In addition, it was established from the start that the effectiveness of the program would be measured by satisfactory achievement of MLO test items developed through the Evaluation Unit of PEEP.

The first three levels of "Educatodos" were strongly supported by IRI broadcasts with some additional print materials, while the last three levels emphasized print materials with less support from IRI broadcasts. Exercises were part of the radio lessons in levels 1 and 2; while in level 3 a workbook containing practice exercises was added. In developing levels 4–6, it was necessary for the MOE under PEEP to elaborate the MLOs and develop themes [10] for each cluster of lessons so the content would be relevant to the needs of the participants. The developers then had to determine how to present the materials in a way that would appeal to adult audiences. They decided that the most effective instructional device would be a dramatic setting in a small rural town "New Dawn" with the main characters consisting of a younger and an older couple, and sometimes a wise grandfather figure who represented the accumulated knowledge of the community.

The details of the support system for the program varied from community to community, but had the same essential ingredients. Local facilitators with minimum sixth grade education provided administrative and academic assistance in each class site, and helped motivate students to enter and complete the program. As representatives of their communities, the facilitators ensured that the program fit the aims of their organizations. Sometimes in remote areas they were volunteers, but usually the government paid them a small salary or the equivalent in food assistance from the World Food Program. Facilitators were given a brief orientation consisting of a one-day training before the course and a one-day followup half-way through the series of lessons. Local mayors were also given orientation about the program in hope that they would support it after donor funding ran out.

Classes were usually held in community buildings, schools, or private homes, and radios had to be provided by local individuals. After the first level, students often formed their own study groups and some

[10] The themes were 1) individual and the family in productive work, 2) health and food production, 3) national identity and cultural revival, 4) sustainable use of natural resources and protection of the environment, and 5) citizen training for peace and democracy.

even listened individually to the program. Since diplomas were awarded on the basis of mastery, it was technically only necessary for participants to pass exams. This gave considerable flexibility to the program and the needs of the participants.

Other important elements of the support system included a distribution system to make sure printed materials were delivered to study centers before broadcasts, and a monitoring system to ensure broadcasts were clear, played in the proper sequence, and occurred regularly and on time. Although supervision was also deemed important for quality control, supervisors often did not visit the centers regularly, because as government employees they were frequently appointed for political reasons rather than for their interest in the program.

Marketing was yet another area that, though important, was not sufficiently addressed, according to Corrales (1995). The project should have worked more to ensure that illiterate populations demanded access to literacy programs. Marketing or advocacy would also have been useful with key decisionmakers at the MOE, in local governments, the business sector, and with potential and existing participants (20).

Funding tends to be a problem for IRI programs, both in the development phase and during routine delivery. Even though analyses show low per-student costs, recurrent costs of broadcast time and print materials are often seen as burdensome to resource-strapped ministries of education. Honduras realized a number of savings in development costs by building on the skills, capacities, and ideas that survived from the earlier IRI math program. Their main funds for the development of the first three levels of "Educatodos" came from LearnTech's core contract and through two of USAID's ongoing projects. The total cost was roughly $800 thousand. The implementation costs of facilitators, printing and distribution of materials, contracts with local radio stations, and the administrative costs of supervision, registration, and accounting were borne by the government. In another context, more of the costs might optimally have been shared with the business community or even with the participants themselves.

Both formative and summative evaluations were conducted to ensure the effectiveness of "Educatodos." The former shaped program design and content, and the latter determined ultimate impact on the learning in core subject matters and skills. The experimental groups listening to first- and second-level broadcasts and using the related materials were compared with groups studying in conventional evening schools. Age, gender ratio, and socioeconomic status were similar, but location (conventional classes were in urban areas) and facilitators were different

(conventional classes usually had professional teachers). Overall, IRI students had consistently better scores. The difference in the first level was almost 20 percentage points in math, and only a small difference in language. In the second level, there were 11 percentage point differences in math and only a small difference in language. Program managers explained these differences as the result of their extensive experience with IRI, math while the "Educatodos" language program was only being developed for the first time and therefore had less experience to draw on.

Third-level classes were compared in a similar way, but this time using an additional control group of primary school students and using tests based on MLO items. Again the tests showed much the same results: an 11 percentage point higher score for the IRI students over the conventional adult classes in math, and a small advantage in language learning. In science, IRI students performed better by 7 percentage points and in social studies by 10 percentage points. What was striking, however, was the much higher IRI scores in comparison to the scores of primary students. IRI students on average scored 22 points higher on math, 13 points higher on language, 20 points higher on science, and 20 points higher on social studies—in all cases on official tests deemed by the MOE to measure learning in these subject matters at the primary level.

On other measures IRI students also showed evidence of more positive impact. There was lower attrition—especially in the case of males—than in conventional classrooms, although concern continues that attrition—a problem common in adult education programs, needs to be addressed more aggressively with training for community facilitators. IRI also narrowed the gender gap in achievement in math and Spanish, and although by level 2, men scored higher in math than women, women had the greater learning gains and scored higher than men in Spanish. By level 3, men had higher learning gains than women in math, while women scored higher and had much higher learning gains than men in Spanish. Per-student costs of the IRI program were also much lower than for conventional adult education classes.

Broadcasts of the first three levels of the adult education program began in June 1995, and in preparation, 43 MOE supervisors were trained to work with facilitators. The supervisors in turn were accountable to a 20 person Technical Committee whose members spend 50 percent of their time in the field monitoring and overseeing the operation. Recent estimates (see Dock and Helwig 1999: 21) report a total of 70 thousand, students enrolled in the adult education program each year, with their numbers rising as the last four levels have come on line.

At present as part of the Girls' and Women's Education Activity, Component II, an analytical study is being undertaken in Honduras to determine the impact of the "Educatodos" adult program on indicators of social and economic development. While internationally the impact of formal primary education on indicators is well known, in the case of females who complete primary education at a young age, it is still a question whether the same impacts can be achieved when females acquire basic academic skills for the first time as adults.

Summary and conclusions

Honduras has high levels of initial primary enrollment and no overall gender gap. However, this positive statistical picture obscures the fact that the country has high levels of repetition and dropout. According to studies, under-reporting of repetition conceals the fact that enrollment in grade 1 may be considerably lower than it may at first appear. Furthermore the main reason for repetition is poor academic performance. It is likely that if the quality of academic programs could be improved, the levels of repetition and dropout might be reduced to insignificant levels.

In addition, the recent rapid increase in primary opportunities has left large numbers of young Honduran adults either illiterate or with education skills at less than a primary level. In trying to alleviate these problems of poor program quality and low skill development, the government in the last decade has instituted two radio learning activities, one to improve primary school math and the other to provide an accelerated program of primary equivalency for adults. Both proved highly successful in terms of cost-effectiveness and providing better learning. The math program failed, not for lack of academic success, but because of failure in its institutional and funding arrangements. The "Educatodos" program, building on the IRI math experiences, continues to provide cost effective, second-chance primary education to young adults. It is a useful model for countries looking for a cost effective way to provide flexible programming for any large, educationally disadvantaged segment of the population, whether it be school-age children or adults.

Mali: An experiment with community schools

Introduction

Historically, Mali's strategic location—bordering on seven nations, including one on the Mediterranean to the north, four with coastlines on the Atlantic, and two in the interior of Africa—made it an important stop on ancient trade routes connecting Arabia and Black Africa. Gold, ivory, kola nuts, and slaves moved north from West Africa to Europe and the Middle East, and salt was carried south by the Tuareg nomads. The central point where the caravans converged was Timbuktu, an important center of Islamic learning between the ninth and sixteenth centuries.

Mali became a French colony in 1883 and eventually part of the territory of French West Africa. France developed the colony as a cheap source of cotton and rice for the homeland. The Francophone West African countries still share a bond that is reflected in their common currency, their national language, and other forms of cooperation. France generally covers Mali's chronic budget shortfalls and other Western nations are major donors of development assistance, which in 1990 totaled 20 percent of the country's GNP.

In 1960, when Mali gained independence from France, only 7 percent of its children had been educated, mostly in colonial schools where a select few graduates became administrators. Mali's first government, supported by the Soviet Union, experimented with socialism. From then until the 1980s, when a free enterprise system was reinstated, there was considerable civil disorder brought about by drought, food shortages, and a weakened economy. In 1992 a multiparty election was held, and Alpha Konaré became president. Since that time, sporadic unrest has broken out over economic problems. At the forefront of these protests have been the largest trade union and secondary and university students.

Mali has an area of almost 1.24 million km^2 and is the largest country in West Africa. Its population of more than 10 million with a birthrate of 2.9 percent is expected to rise to 24 million by 2025. About 5 percent of the population live in urban areas and about three-quarters earn their living primarily from agriculture. The population comprises a number of ethnic groups including the three largest: the Bambera (25 percent), who live in areas around Bamako and Segou and occupy many of the senior positions of government, the Tuareg (previously nomadic herdsmen), living in the north in areas bypassed by development, and the Dogon, agriculturists living in the east just north of the border with Burkina Faso. Most schools are located in or near urban centers, especially in the region around the capital city of Bamako. There are said to be roughly 10 thousand villages in Mali, a number that suggests the difficulty of trying to universalize education in such a resource-poor country.

Roughly 80 percent of Mali's population today are Muslim and the rest (mostly Dogon) hold traditional religious beliefs (15 percent) or are

Christian (5 percent). French continues to be the national language, a lingua franca among the educated of the region and the dominant language of instruction in the schools. It is considered the language of broad communication and of social mobility. Bambera is the most widely spoken local language, being almost identical to Dioula the market language used in much of West Africa. A number of other local languages and dialects are also spoken. Most parents prefer to have their children study in the early years in their own dialect, but see the importance of knowing both Bambera and French.

Mali has three geographic zones: the south where the bulk of the population resides in small settlements and towns and where rainfall is adequate to sustain scrub forests and rainfed agriculture, the north—almost 60 percent of Mali's land mass—which is largely desert with scant rainfall, and between these two, the flat areas of the Sahel where fluctuating rainfall makes it difficult to sustain agriculture from year to year with any degree of certainty. Mali's main environmental problems are desertification and overgrazing. While cotton remains the main export earner, followed by livestock, it is hoped that gold (of which Mali has large supplies) eventually will surpass these others as an export earner.

Mali is one of the world's five poorest countries. It has a per-capita GNP of $260 (1997), a life expectancy of 54 years (1998), and a caloric intake estimated to be 30 percent below the required minimum, a literacy rate of about 32 percent (1995), among the 10 lowest in the world, and a mortality rate for children under five of 237 (1998)—the fifth highest in the world. It also has the fifth highest infant mortality rank (144 in 1998) in the world. These indicators suggest the vital importance of girls' education if Mali is to improve its overall social and economic development.

Education in Mali

The structure of education

Primary education is managed by the Ministry of Basic Education (MEB) located in Bamako. The MEB remains highly centralized despite recent efforts to decentralize some of its functions. It maintains control over personnel, budget allocations, development of curricula, and pedagogical assessment, and is responsible for the conception and dissemination of education policy. The MEB is represented by directors at the central and regional levels and by inspectorates at the "circle" levels. The National Directorates provide information, training, and technical resources to local and regional levels. The eight regional offices, originally set up with the objective but "not the responsibility" for increasing enrollment rates, implement the orders of the higher offices, and the 35 zonal offices inspect and manage staff and facilities at the local level.

In reality, despite the intention to decentralize and share responsibility, regional and zonal offices implement the directives of the central office but have no real decision-making autonomy (Coulibaly 1994: 8). Schools are managed by headmasters.

At present, education in Mali consists of three levels, primary (grades 1–6), lower secondary (grades 7–9), and upper secondary (grades 10–12). A seamless basic education stage of eight years is expected to be established under the 1998 Ten Year Plan. A child enters school at about age 6 and, all else being equal, should complete the primary level by age 11.

Primary education has been delivered through three main systems: a public system, a small private school system consisting of madrasas (Islamic) and *écoles de base* managed by parents and community organizations, and adult literacy in nonformal programs. In 1995/96 there were 683 thousand primary students of which 8 percent studied in private schools and 11 percent in madrasas. In 1998, a reform initiative began encouraging the establishment of community schools. In that year, there were 2,377 public primary schools and nearly 900 private schools. There were also 245 (now 500 or so) community schools provided with partial support from donors. The community schools are expected to increase in number in the coming years, while the number of public schools is expected to stay about the same. In 1987, the madrasas came under the supervision of the MEB. The madrasas focusing on religious subjects as well as basic academic skills are less expensive than public schools, are located in the neighborhoods of children's homes, and teach moral values—all of which appeals to parents. The community schools established by rural parents have a four-year rather than a six-year cycle, but that may change. Parents support the costs of many school inputs, while regional inspectors from the public system are supposed to ensure quality.

Primary education suffers from severe underfunding, even though roughly 25 percent of the national budget is devoted to education. The reasons include overall national resource constraints, inefficiencies in the use of existing resources, and political considerations that divert the largest part of the education budget to secondary and higher education (in 1994, only 38 percent of the education budget was devoted to primary). The government stopped constructing schools in the early 1980s, and the quality of the academic program has deteriorated as a result of an inadequate supply of materials, a lack of basic and inservice training for teachers, and an inadequate supply of supervisors. The pupil-teacher ratio in 1996 was a very high 70 to 1, and the pupil-classroom ratio is 143 to 1.

Schooling participation

Preprimary enrollment

There is a very small preprimary program that is largely private, charges fees, and is mainly available in urban areas. Gross enrollments at this level are roughly the same for males and females (under 3 percent).

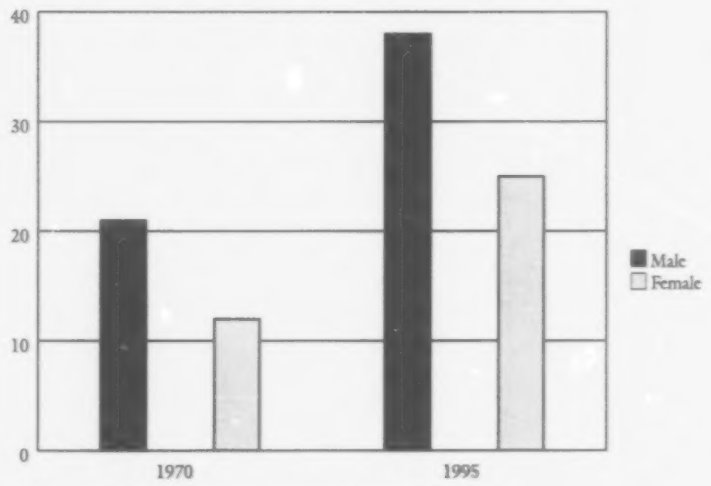
Gross primary enrollment rates

At the primary level in 1970, less than a quarter (23 percent) of all children went to school, with a rate for boys of 30 percent and for girls of 16 percent. The gender gap remained fairly steady until 1990 when it began to widen. By 1996 the comparable rates were roughly 55 percent for boys and 35 percent for girls.

Net enrollment rates in primary school

The net enrollment rates provide a somewhat more accurate picture of primary school enrollment.[1] In 1970, 21 percent of relevant-age boys and 12 percent of girls were enrolled. In 1995 the comparable figures were 38 percent for boys and 25 percent for girls. In 25 years, enrollment rates of children have not even doubled, and the gender gap has increased. More than two-thirds of all children still remain out of school.

Fig. 1: Net Primary Enrollment Ratios (%), Mali



Source: unescostat.unesco.org/en/stats/stats0.htm

Intake rates

Another sign that the situation has remained stagnant is that over this period primary intake rates remained little different from overall enrollment rates. In a situation of rising participation, the intake levels should be much higher. In 1980 (the first year that sex-disaggregated data were available) the intake rate was 29 percent for boys and 17 percent for girls, and in 1995 it was 39 percent for boys and 28 percent for girls. During these 15 years, the gender gap remained virtually unchanged.

School expectancy

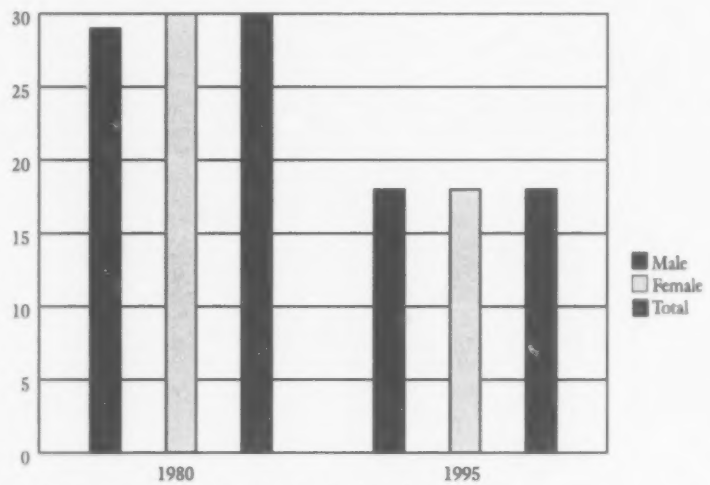
Perhaps the most serious sign of stagnation is the low school expectancy rates in Mali. In 1970, 15- to 19-year-old males on average completed only 2.4 years of schooling and girls only 1.2 years. By 1990, the figures were virtually unchanged.

[1] Some observers suggest that official enrollments of 6- to 9-year olds may be inflated by double the actual rate.

Repetition

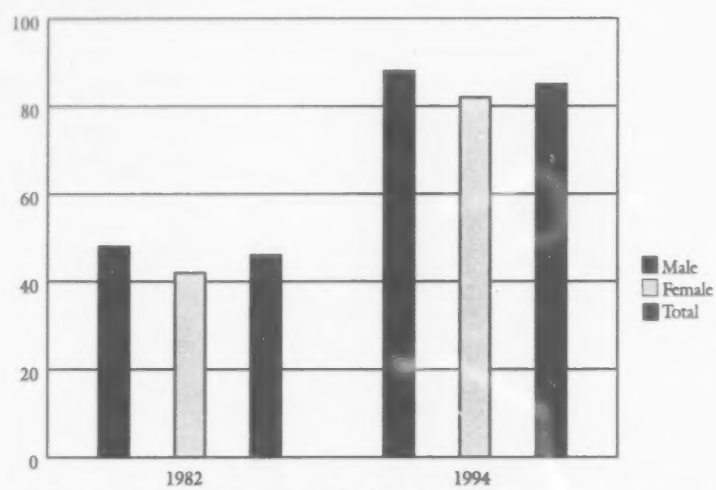
In 1980, girls repeated at slightly higher rates (30 percent) than boys (29 percent), and both remained at these high rates until 1995 when the rates for both decreased to 18. Over the years, girls and boys have repeated at virtually the same rate at the primary level. At the secondary level the repetition rate for both was 17 percent.

Fig. 2: Repeaters in Primary (%), Mali



Source: unescostat.unesco.org/en/stats/stats0.htm

Fig. 3: Survival Rate in Primary (%), Mali



Source: unescostat.unesco.org/en/stats/stats0.htm

Completion (survival) rates[2]

In 1970, half of all children who entered school completed the primary level, and by 1995 roughly 82 percent who entered completed the level.[3] In most years, girls survived at slightly lower rates than boys but in some years at a slightly higher rate. This suggests that children of either sex who take advantage of schooling opportunities in Mali have a strong motivation to continue.

Age-specific enrollment ratios

Age-specific data in 1995 show the highest ratios of children enrolled in school by ages 8 and 9. These data suggest that children start school late. Girls at every age are outnumbered by boys, and their rates decline more quickly from age 12 on, probably as a consequence of puberty.

Transition rates

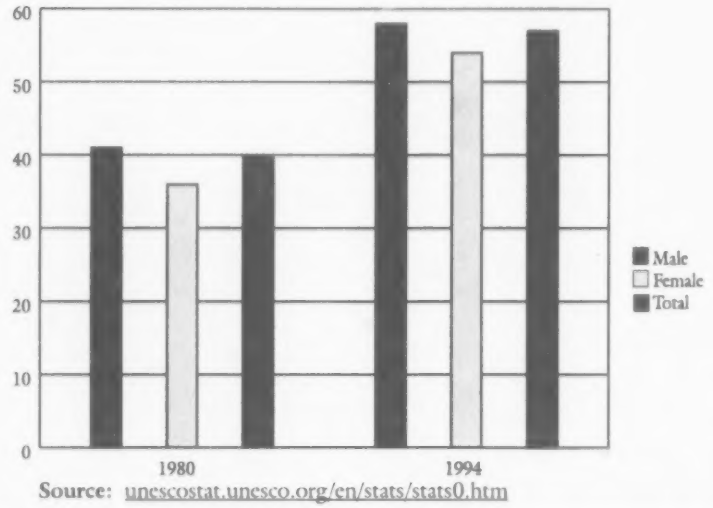
In 1980, roughly 40 percent of primary graduates went on to the second level of schooling. That number reflects a fairly similar rate for boys (41 percent) and girls (36 percent). By 1994, it was 57 percent overall, with 58 percent of boys and 54 percent

[2] The dropout rate appears to have been about 5 percent in 1996.

[3] The "withdrawal" rates are 5 percent at the primary level and a much higher 14 percent at the secondary level.

of girls continuing. Even though only about half the children who complete primary continue on to secondary, there is little difference in the persistence of boys and girls. One would need to look at the supply and location of secondary opportunities before suggesting that these transition rates should be higher.

Fig. 4: Transition Rate, Primary to Secondary (%), Mali



Source: unescostat.unesco.org/en/stats/stats0.htm

Gross enrollment rates at secondary

The secondary level shows considerably lower rates of schooling than primary. Here in 1970 the gross enrollment rate was 8 percent for boys and 3 percent for girls. By 1996 the comparable figures were 14 percent for boys and 7 percent for girls.[4]

Net enrollment rates at secondary

The net enrollment rates at the secondary level in 1970 were 6 percent for boys and 2 percent for girls. Figures were not available for any other years except 1990 when they were virtually the same at 6 and 3 percent respectively. Overall secondary enrollments have hardly increased at all in this 20 year period.

In brief, girls participate in primary education at a lower rate than boys in Mali. The critical point of difference is initial entry where low overall rates of participation mean the problem is also severe for boys. Rates of participation are also low for rural as compared to urban children and for some based on their region of origin (e.g., northerners). Gender aggravates the disadvantages of both these groups. Once in school, rates of repetition, dropout, and transition to the secondary level are roughly the same for boys and girls. Finally, overall inefficiencies (it takes 22 years to produce one primary graduate) mean that Mali's limited resources do not serve as many children as they might (WB PID document 1995).

Girls' education issues

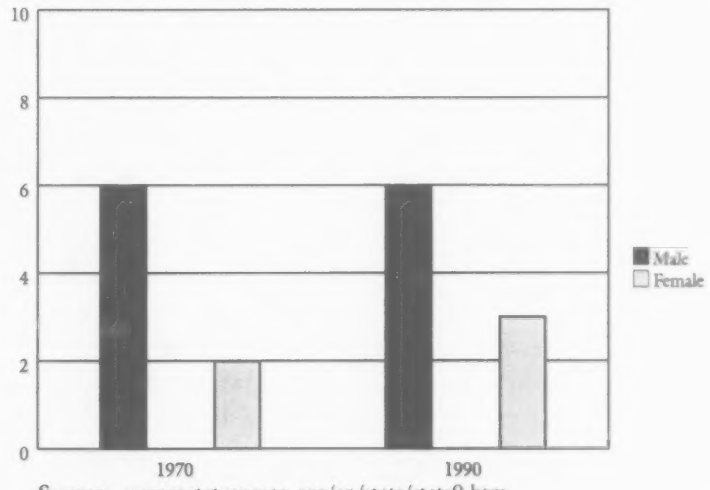
The constraints affecting overall primary participation in Mali appear to be lack of accessible schooling opportunities. It has been estimated that the public system can only accommodate about 20–25 percent of

[4] The World Bank reports that in 1995, gross enrollment rates for lower and upper secondary were 15 and 6 percent respectively.

all primary-age children. According to reports, a substantial unmet demand for education exists in urban areas and a slightly less, but still important, demand is found in rural areas. Additional reasons for low enrollment where schools are available are the high costs of education (enrollment fees, taxes, equipment, books, school funds, and sometimes construction and teachers' salaries), the long distances to schools and the high cost of boarding accommodations, a lack of adequately qualified (especially female) teachers, irrelevant curriculum, and cultural perceptions that education alienates children from their local environments and makes them less likely to adhere to village respect behaviors, lack of job opportunities, and a poor connection between training and employment. On the positive side, some attribute the increasing interest in education to the influence of those who migrate to cities and other countries and have seen the advantages of education (The World Bank, 1993. *Assessment of Living Conditions.* No. 11842-MLI: 21).

Girls may have additional reasons for lower participation. Rural girls may leave school prematurely to prepare for their marriages—many are engaged or married by ages 13 or 14. They may have more difficulty than boys coping with the use of French in the early grades (The World Bank, 1993. *Assessment of Living Conditions.* No. 11842-MLI: 21). Some Muslim parents are said to prefer Koranic schools believing that French language instruction might "lead their children astray," including the possibility of conversion to Christianity. They may feel especially sensitive about protecting girl-children against the dangers perceived to be inherent in a "secular" system. On the other hand, the Islamic faith of much of the population has been given credit for the lower rates of HIV in Mali compared to other non-Muslim African states. This has meant less disruption in family life, a factor that has positively affected the childhood of many boys and girls in Mali.

Fig. 5: Net Secondary Enrollment Ratios (%), Mali



Source: unescostat.unesco.org/en/stats/stats0.htm

Another factor affecting participation is that rural residents tend to live off their own production and barter the excess for other needs. Extra cash for schooling expenses may be difficult to find and poor peasants may see few benefits in removing their children from farm

work to send them to school. If choices are to be made between children, girls are more likely to be kept home.

Initiatives

Providing more opportunities (community schools)

The education sector in Mali is unable to provide schooling opportunities for more than a fraction of its relevant-age children, and relies to a large extent on private and international support to expand the number of primary school places. Four groups have been responsible for the initiatives to expand primary education: private individuals and organizations, NGOs, communities, and international donors. After the government withdrew from school construction in the early 1980s, many communities took responsibility for establishing their own schools. APEs, or parent-student organizations, in many communities built, furnished, and supplied their own primary schools, and paid teachers' salaries. Adult literacy and Koranic schools were almost entirely financed by communities. Before 1991, APEs could obtain funding through local and regional development taxes that have since been discontinued. Now, in rural areas, the government only takes responsibility for training teachers, supervising schools and staff, maintaining curriculum requirements, and implementing a system of national exams. Communities do the rest with support from whatever sources they can find.

A number of donors have contributed to the education sector in Mali, including the African Development Bank, CIDA (inservice teacher training), Germany, the Netherlands (school rehabilitation), OPEC, and IDB (classroom construction and rehabilitation), UNDP/UNESCO, UNICEF, and The World Bank. Since 1982, USAID has had a steady involvement.

In 1989, USAID's Basic Education Development Project (BEDP) set as its goals increasing girls' education and improving the quality of the academic program. There were three strategies: to coordinate and improve teacher training, instructional objectives, and student testing; to encourage local communities to support schools (especially the 1,500 schools built after 1991—by mandate each had 50 percent girls' enrollments); and finally, to strengthen the capacity of regional institutions to manage and provide pedagogical support for schools. The main physical inputs appear to have been 700 rehabilitated classrooms, some furnishings, and 600 thousand textbooks. Supporting mechanisms were policy changes that established educational offices at three levels to administer girls' education initiatives and the formation of a legal framework for the development of private and community schools.

According to USAID, in the four years of BEDP (1989–1994), enrollments increased in the project areas by 60 percent (67 percent overall

for girls and 83 percent for 7-year-old girls entering primary), the rate of primary graduates increased by 65 percent, and the average number of years to produce a graduate declined by 78 percent. In addition, dropout rates decreased by 70 percent and repetition rates by 16 percent.

In 1998, the democratically elected government officially initiated a 10-year decentralization program. The government committed to increasing the share of the state budget allocated to education from 22.53 percent in 1996 to 27 percent in 1999 and reallocating resources to give priority to basic education so that by 2008 the share of basic education would be 59 percent. The amount allocated to instructional materials was to rise to 19 percent. The Plan encouraged towns and villages to build their own primary schools and hire their own teachers, granting them autonomy over their schools. The aim was to educate 75 percent of Mali's children by the year 2008, and reduce inequities among regions and between the sexes. Approximately seven thousand classrooms were to have been built and equipped to accommodate these increases. The Plan also called for restructuring primary education into a seamless eight-year compulsory program of basic education. If implemented this goal would have had major implications for the establishment of community schools.

One way Mali has been able to expand places was through multiple shifting. In 1995/96, 28 percent of public school classes were double-shifted and this ratio was expected to rise slightly during the 10 years of the Plan. The program was adapted to shortened hours by dropping some subjects and combining others through the integration of curriculum materials. To make better use of teachers some schools (26 percent of all public classes) also organized multigrade classes. An assessment of student achievement in double-shifted schools showed no difference from the achievement in single-shifted schools. Despite this evidence, however, there was strong resistance[5] to expanding double-shifting as a solution to overcrowding. One observer noted that with current methods of teaching—requiring intense teacher involvement, the multigraded classes probably provided poorer learning than the single classes in double-shifted schools.

Meanwhile USAID's BEDP was followed in 1995 by the Basic Education Expansion Program (BEEP), which sought again to improve quality, equity, and efficiency. Among its strategies during this phase was to expand the number of accessible opportunities through support for PVOs working to establish community schools, Save The Children (STC), World Education (WE), and later Africare. These organizations

[5] The same teachers teach in both shifts, which makes for an extremely long work day. They appear to be the ones most against this practice.

were to work with local NGO partners to facilitate the establishment of schools in over 500 communities in the mid- and southern sections of the country.

The PVOs used somewhat different approaches. STC schools used Bambera, while WE schools used French as the medium of instruction. WE implemented the regular curriculum, while STC developed its own instructional materials. Africare took an integrated health and education approach. All three helped communities with the expenses of constructing schools—usually roofs, window frames, and latrines—at a cost estimated to be 20–30 percent of the cost of building public schools. They provided a supply of instructional materials, and supported a staff of facilitators to check on the schools. All worked through village committees to establish the schools. Ultimately, village support was expected to grow until parents assumed all the costs of community schools not provided by the government.

The Malian community school model grew out of the example of the work of the BRAC program in Bangladesh and its assumptions that primary costs could be drastically reduced and that human resources with training could be found locally to staff and manage schools. STC schools, for example, recruited 60 students every three years to make two classes with gender parity. Local teachers were given two weeks of initial training as well as annual two-week inservice seminars. Classes in the first three years were in Bambera, the curriculum was reduced to essential reading, writing, and numeracy skills, and basic knowledge of village life, health, etc. were introduced into grades 2 and 3, and French optionally in grade 3. A village management committee composed of leaders and parents made decisions about the recruitment of students and teachers, finances, school hours, etc. STC believes these schools demonstrate that sufficient demand exists for education in rural areas and that villagers are willing to support the costs of local schools with relevant content if they have input into how the school is managed and run (DeStefano 1996).

CARE has also facilitated the establishment of schools in Mali, and is at present helping communities set up schools in northern areas where the Tuareg live (CARE is one of several private organizations working in that area). These tribesmen have been more open to education since the decline of nomadism, and after seeing the successes of a few of their members who became educated. In one such school, a private charity provided the salary of a teacher for six months and the community raised $60 to buy a tent and provide school necessities. About 40 percent of the students are girls. With each passing year the school buys a new tent and finds an additional teacher to accommodate the added primary classes.

PLAN International has also provided support for community education since 1976. From that year until 1998, PLAN constructed and equipped 123 three-room schools and three kindergartens, providing students of these schools annually with materials (41,300 students in the 1999 fiscal year), and training teachers and supporting local school management committees. In addition, in the nonformal sector, PLAN helped its NGO and community partners in more than 84 villages set up Centers of Education for Development (CED) to provide literacy services to adults and adolescent children who have either not attended or dropped out of school.

A number of issues have been raised by these local community initiatives. Some of the most important are the questions of what role the government will take in the future with these schools, whether community schools over the long run can be sustained in economically hard-pressed areas where the value of education is not always apparent; whether graduates of the community schools will be equipped to move into higher levels of education where French is the medium of instruction; whether graduates will find nearby accessible opportunities for higher stages of learning; and whether local teachers are capable of teaching the more difficult subject content of the late primary years (if these schools are extended to the end of the primary or basic education level).

Without a doubt, the community schools have brought education to many children in Mali, and in general the model or one like it may be the only hope for educating rural children in that country. Issues, however, remain with regard to the way the program is implemented. Some observers question the underlying assumption that decentralization can work in "a system where power, expertise, and information is monopolized at the upper level of the hierarchy." Even were it possible to devolve decision-making power to communities, they ask, can greater efficiencies and more effective impacts be realized in the face of years of experience with administrative centralism? The implication of the question is that though communities can certainly assume a much larger share of responsibility for schooling, it will be difficult in the short term to transform economic, political, and cultural conditions into the individualistic, autonomous, "democratic" responses expected if free market forces are to work effectively in providing schools. One observer feels there should be a more realistic approach to the involvement of communities and APEs. He suggests the need for greater reflection and correction in implementation when it becomes apparent that modifications are required, rather than the present effort to inflexibly push ahead with paper agreements whose unrealistic conditions cannot be effectively met (Coulibaly 1994).

Providing more relevant curriculum

Rural parents were reported to have complained that the schooling program as it existed in community schools was not geared to the needs of villagers. Parents noted[6] that while they believed literacy and numeracy and the ability to speak French were relevant, they felt that schools did not reinforce the traditional values of the villagers and especially the hierarchical respect values that were important in their culture. They believed also that children should come away from school with practical skills that would give them a chance to earn income: for boys, agriculture, carpentry, construction, and welding, and for girls, sewing, cooking, crafts, etc. Though this desire was understandable, experience in other countries (e.g., Egypt) showed that to institute such programs in primary schools would be extremely costly because of the raw materials, technical expertise, training, tools, and instructional materials required. In rural areas of Mali, where teachers are only minimally qualified and classes are barely equipped with enough textbooks for each child in the class, a course of this kind would be impossible to organize on a large scale (although it might be organized by communities willing to hire a skilled workman and support the other costs).

To respond to parental demand for more relevant[7] skills, the Girls' Unit of the MEB in early 1999 with funding from USAID prepared life skills materials for primary classrooms. Specifically the materials aimed: to provide program content related to health, nutrition, simple first aid, the environment, and other subjects for which there was limited "scientific" information in the village; and to make learning more attractive to rural children, especially girls who are called upon in daily life more than boys to use this kind of information. The information was intended also to empower girls in their home environments. The simple reading passages were presented in story style with a girl heroine who usually had the correct knowledge when problems occurred in her village. Each lesson had the dual purpose of communicating information and providing additional reading and comprehension practice. The materials were written in a workshop by MEB educators and PVO and NGO fieldworkers and intended first as supplementary materials, but it is now likely that they will be directly incorporated into new instructional materials.

[6] In interviews conducted by the author in 1999.

[7] By an international standard since villagers are not aware they need such information. This raises the issue of whether villagers know the extent of the skills or content information that is needed to operate effectively in the larger regional, national or international environment. If making decisions based on their own experience many might not choose literacy skills at all since they may have a limited local relevance.

Other initiatives affecting girls' participation

The 1998 Ten Year Plan called for reducing the inequities between the sexes and stated specifically that the MEB aimed to include curriculum content related to the needs of girls and to create a schooling environment favorable to their development. The Plan stated that the MEB would mount a continuous campaign to sensitize and mobilize populations in favor of girls' schooling. Most of the recent initiatives mounted in Mali directly or indirectly affect girls' schooling, including those already discussed above—accessible neighborhood schools, community involvement, enrollment quotas for girls, life skills materials, etc.

In addition a feature that is expected to prove attractive to girls is the MEB's new policy of allowing teachers to teach in local languages in the first three years of primary. The MEB has begun to prepare textbooks in the main local languages. At issue is how many of the 10 main languages should be used (literacy training offers all 10) and whether it is the best use of resources to produce materials and special training in so many languages. Also at issue is whether literacy can be maintained with so few reading materials in those languages. Parents are not entirely sure they want local language teaching beyond the first years, and even educators see local languages not as an end but as a bridge to other languages having wider utility. On a practical level, few rural teachers have the capacity in French to teach at the required level (and many may also not be accustomed to reading and writing in their own local languages).

The Ten Year Plan stated that the MEB also aimed through improvements in the academic program to reduce primary repetition from 18 to 5 percent and the dropout rate from 5 to 4 percent. Internal efficiency in the six years of primary was also expected to rise over the 10 years from 9 percent to 24 percent.

A number of initiatives in Mali have targeted the quality of the academic program. Many of these efforts have been implemented with USAID technical assistance and through USAID and World Bank funding. For example, the Education Sector Consolidation Project, supported by the World Bank and other donors, sought to improve, among other components, the performance and relevance of primary education through monitoring the qualitative impacts of program activities, providing pre- and inservice teacher training using cascade methods, adapting the primary curriculum to fill gaps in subject matter, providing textbooks and other instructional materials based on instructional objectives and training teachers in their use, and strengthening the inspection and teacher counseling systems. While some improvements

in the quality of inputs occurred, the lack of alignment between these inputs and assessment made it impossible for evaluators to know whether the inputs had any real effect on learning. In the end, while program evaluators felt the improvements may have attracted more students, including girls, they noted that the equity concerns that prompted double-shifting[8] and multigrade teaching may have detracted from quality. They warned that quality should not be subordinated to equity and efficiency goals or there would be no real purpose in increasing access to schools (Moulton 1996).

As part of the quality reform strategy, the system of inspectors and pedagogical counselors was also strengthened and transport was provided for them to visit schools. Mali has 31 inspectorates with limited staff (one inspector and one counselor in most offices). Their responsibilities include cascade training and support of teachers, as well as their inspection function. These supervisory systems, usually a remnant of colonial bureaucracies, have remarkably similar problems in the countries where they exist. They are notoriously difficult to energize as a catalyst for improving quality unless accountability is built into their performance. This is not the case in Mali.

In general, efforts to improve the program have produced disappointing results. The classroom environment may appear more attractive to the students, but skill development has not improved significantly. As late as 1996, when the STC schools had been in operation for three years, a STC report noted that no systematic assessment of student achievement had been undertaken (DeStefano 1996: 5). This statement seems quite amazing given all the effort and thought that had gone into improving the academic program. It is difficult to see how developers can know whether materials development, teacher training, and supervision improve without some measurable evidence that they work. This model runs into the same difficulty as many other reforms of quality: the assumption that certain changes in inputs like teaching method or supervisory activity will necessarily lead to better learning results.

A study was finally undertaken to determine learning impact after the community school project had been in operation for four years and 75 schools had been established. The achievement of students from 13 STC, 3 NGO, and 12 government schools were compared. The STC students had low scores in all schools, but they performed as well as or better than government students in core subjects. Their repetition and dropout rates were lower and progression rates were higher, and

[8] No decline in achievement occurred but teachers were unhappy with double-shifting and students may have found the situation less attractive.

it appeared that attendance rates were also higher, suggesting that indeed the STC program may have been more attractive to children (and perhaps was better monitored). Regression analysis showed that these differences were due to the schools and not to household or child factors. The better schools also had a higher level of pupil participation and engagement encouraged by the teacher. (Ridker 1997: 9–12). While these results are promising, given the more remote rural nature of the STC schools and the lower qualifications of the teachers, it is disappointing that STC students, who focused only on core subjects and studied in their own local languages, had not developed better skills overall.

Another feature that may have been important to girls' participation was the presence of educated female role models. Even though most teachers in community schools were male (because of the limited number of literate women in villages), a few women have become teachers and facilitators in community schools, and girl students often say that they would like to become teachers or facilitators when they become adults.

Conclusions

Mali provides an example of a poor country where lack of resources has made it difficult to provide any but a very small minority of the population with education services. The absence of schooling opportunities has disadvantaged boys almost as much as girls. Statistics show that it is the point of entry into primary school when girls show the greatest disadvantage compared with boys—and this disadvantage skews their participation rates throughout primary and secondary schooling.

The MEB, with the support of the donor community, has focused its efforts primarily on the provision of primary opportunities and only secondarily on improving the quality of the academic program and the capacity of the MEB to manage education. Experiments with the establishment of community schools have demonstrated the willingness of community members to provide substantial support for local schools. Questions remain, however, with regard to whether these initiatives can be sustained by cash-strapped villagers without the support now provided by outside donors and facilitators. The other question is whether similar initiatives can be mounted in the thousands of villages that still have no schooling. Some voice concerns about the equity question: Why must rural villages support their own schooling while urban communities receive schooling free? And does the need to fund their own schooling widen the socioeconomic gaps between villages that can and cannot afford to do so? At present the poverty of Mali's

national government leaves no alternative to community-supported schools if schools are to exist at all.

The Malian initiatives that support the entry and continuation of girls in school include locally accessible schools, the involvement of communities in determining the conditions of schooling, equal entry quotas for boys and girls, the development and inclusion of relevant life skills materials in the curriculum, and the use of local languages in instruction. A factor that inhibits their continuation is the poor showing in academic skill development and the generally unfavorable environment in villages for demonstrating the utility of education to girls.

In a certain sense, Mali has reached this resource crisis ahead of other countries that may face similar problems if their under-15 populations continue to grow at a rapid pace. The experiments now being undertaken in Mali to increase primary enrollments and to forge a new role for the education bureaucracy may one day, therefore, be instructive.

Pakistan: Efforts to improve program quality[1]

Introduction

Pakistan's civilization is an ancient one, going back to two unique Indus Valley empires that were as extensive as those of its contemporary trading partners Egypt and Mesopotamia. Over the years successive groups of conquering armies, agriculturists and traders, crossed the Indus Plains from the west to move into present-day India and Pakistan, leaving their mark on the culture of the area. For centuries the territory that is modern Pakistan acted as the frontier between areas of settled agriculture and pastoral nomadism. Urban centers served as a place where villagers bartered their surpluses for other necessities, rather than as major commercial centers, a characteristic that survives in the provinces of Northwest Frontier (NWFP) and Balochistan Provinces today.

Islam first made its influence felt during the seventh century through contact with sailors and traders following trade routes through the Persian Gulf and into the Indian Ocean. The Islamic influence remained largely commercial until the eleventh century when Turks invaded from the northwest. They remained in control until the thirteenth century when Genghis Khan cut the Delhi Sultanate off from Turkish control and Islam began to take on its present distinctive South Asian form. In the sixteenth century the Mughals extended their influence over much of what is Pakistan today and continued to rule until the nineteenth century by which time Islam had developed strong roots in Pakistan.

Although the British East India Company had already been present in India for two centuries, it was not until the mid-to-late nineteenth century that the British Crown established effective control over most of what is now Pakistan. The Government of India Act in 1858 transferred power from the East India Company to the British Crown, and the British intensified their efforts to secure the vulnerable northwest borders of NWFP and Balochistan which were threatened by Russian expansionism through Afghanistan. The British ruled these outposts through local tribal chiefs under the supervision of a Political Agent. The more settled presence of the British in the Punjab and Sind led to extensive transport and communication systems, agricultural development through irrigation works, and some education facilities. However in Balochistan and NWFP, while the British extended railroads and a few major roads to quicken military response, they provided few other services to these remote areas. Education indicators are still extremely low in these two provinces and it is this situation that has attracted major international assistance in recent decades.

The Indian National Congress was formed in 1855 to demand political rights and self-government from the British. Although Muslims

[1] Much of the evidence for this case is taken from the author's experience conducting studies of classroom practices in Pakistani schools in 1987-88 with the BRIDGES Project, through groundwork studies (Human Resource Surveys of Balochistan and Northwest Frontier Provinces), and with the PEDP Program from its inception in the design phase in 1989 to its end in 1994.

belonged to this organization at first, they eventually founded the All-India Muslim League in 1906. In 1940, after a long period of deteriorating relations with the Congress and the British, the League's President Muhammad Ali Jinnah called for the partition of India to give Muslims a national homeland. Pakistan became an independent state in August 1947 with eastern and western parts (the east eventually broke off in 1971 to become Bangladesh) with Jinnah as its first president.

Unfortunately Jinnah died a little over a year later, and many believe the subsequent difficulties Pakistan has faced in its political evolution have been due to the fact that no succeeding leader has had the same unselfish vision to lead the country effectively. Pakistan has seen a series of military and civilian rulers, many of whose regimes have ended in charges of corruption and personal patronage. The result in terms of services has been frequent disruption, inability to sustain reform, and a corps of bureaucrats seeking to advance their personal interests. In education, those who can afford to do so seek private alternatives to the poor quality education provided by the government.

Pakistan is not an easy country in which to provide education services. It has an area of over 310 thousand km^2, large areas of which, in Balochistan and NWFP particularly, are difficult to access by road. There are two distinct geographical areas: the flat plains of the Indus and its tributaries including most of the provinces of Punjab and Sind and parts of NWFP, and the mountainous and plateau regions to the north and west in much of Balochistan and north western NWFP. The bulk of the population resides in areas where the Indus permits fairly reliable agriculture. In more difficult mountainous, desert, and plateau areas where vegetation is sparse or nomadism and animal husbandry is common, settlements tend to be scattered and small. Balochistan in particular has a serious water problem, which is forcing large numbers of its male population to migrate in search of work. Pakistan's main export earnings come from cotton, cloth, yarn, rice, garments, leather and carpets, all with little value-added and subject to fluctuating international demand.

The 1998 census[3] reported a total population of roughly 131 million (ninth highest in the world), with a birthrate of 2.6[4] percent per annum. Pakistan is one of the few countries where males outnumber females. About one-third of the population is urban, but that ratio varies

[2] Three hundred forty-three thousand if the four provinces, the federally administered territories (FATA) and Azad Kashmir are combined.

[3] Rejected by many as flawed.

[4] Many believe the birth rate is more like 2.9-3.1 per annum.

considerably between regions as does the density of settlement (from 13 persons per km² in Balochistan to 230 per km² in Punjab). There are roughly eight thousand villages of 200 or more people in NWFP, and nine thousand in Balochistan,[5] showing some of the difficulty in providing schooling in these low-literacy governorates.

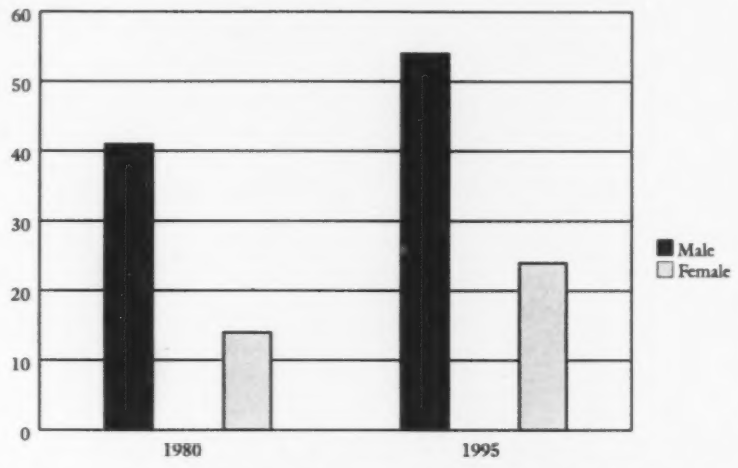
The population comprises a number of ethnic groups including: in Sind, the Mohajirs who migrated from India at Partition and native Sindhis; in the Punjab, Punjabis who dominate public life at the national level and Seraikis who can be found in all four provinces; in NWFP, the Pathans, the dominant group, and a number of other smaller groups including Hindko, Kohistani, Kowar, and others. Pathans also constitute about half the population in Balochistan, followed by Baloch and Brahui. The Pathans are the most conservative of all these groups, which partially accounts for the extremely low levels of female schooling participation in NWFP and Balochistan. They also constitute a major ethnic group in Afghanistan. For a long time, many Pathans have sought an independent homeland that would unify areas they occupy in NWFP, Balochistan, and Afghanistan.

The vast majority (97 percent) of Pakistan's population today are Muslim while the remaining minority includes Christian, Hindu, Sikh, Parsee (Zoroastrian) and others. Urdu (first used as the common language of the Moghul court) was chosen as the national language at independence for its neutral status in a country where every region has its own language. The script is a modification of Arabic. Although Urdu is only spoken as a first language by 8 percent of the population, it is the main language of instruction in schools. It is also considered the language of broad communication, and a necessity for employment in the civil service (English is also required). Females are less likely than males to come in contact with Urdu, especially when they live in rural areas that are ethnically homogeneous. Most parents prefer to have their children study Urdu from the start and also want them to learn English, which opens up better jobs. The line between those who speak English well (usually graduating from private schools) and those who do not (public school graduates) is one of the defining features of class in Pakistan.

Pakistan has a per-capita GNP of $500 (1997), a life expectancy of 64 years (1998), and a mortality rate for children under five of 136 (1998). It also has an infant mortality rate of 95 (1998), and an annual number of births at over 5 million (1998). Though not the lowest in the world, most of these indicators compare unfavorably with overall statistics for

[5] These are rough figures based on Human Resource Survey data. These numbers correspond to the numbers of villages with populations large enough to support a school.

Fig. 1: Adult Literacy Rate (%), Pakistan



Source: *The State of the World's Children 2000*, UNICEF, New York.

South Asia. There is little doubt that Pakistan's poor showing results from its low levels of educational participation, in particular from its especially low levels of girls' education.

The adult literacy rate was 39 percent in 1995 (only 22 percent in Balochistan), although most unbiased observers feel it is considerably lower, since the government's definition of literacy is the ability to read and write one's own name and because statistics are subject to political manipulation. However there is little doubt which populations suffer the largest disadvantage: the poor, the rural, and females. The published UNESCO literacy rate for men (54 percent) is more than twice that for women (24 percent), and there is a similar discrepancy between urban and rural populations. In some rural areas the rates of women's literacy is as low as 5 percent. Progress in Pakistan is slow compared to other countries of the region. Nepal had a 2 percent rate of literacy at independence and now has a 48 percent rate, while Pakistan had a 15 percent rate at independence and has increased only to 39 percent.

Education system

The structure of education

The goal of universal education has been a priority of the Government of Pakistan (GOP) since independence in 1947. The Pakistani constitution enshrines free primary education as a right, and a number of commissions and five-year plans have reiterated the aim of universal education. Still, education is not compulsory since there are not enough primary places to meet the current demand.

Primary education is managed in Pakistan by the Ministry of Education (MOE) in Islamabad and by somewhat different administrative structures in each province. In NWFP and Balochistan, for example, the education structure is bifurcated into Directorates of Primary and Secondary Education. The federal government is responsible for the formulation of education policy, but the delivery of education is a provincial responsibility.

Education is delivered through three systems: the GOP, [6] which accounts for 80 percent of educational provision and almost all provision in rural areas; local government in urban areas; and the private system. In 1980 there were 59 thousand public and private first-level schools with 5.5 million children. Ten years later in 1990 the number was 128 thousand schools and 8.9 million children.[7]

The education system consists of 12 grades of schooling delivered in four stages: primary education (1–5), middle (6–8); secondary (9–10) and intermediate (11–12).[8] These grades can be housed in a variety of ways: as incomplete primary schools up to grade 4, as complete primaries, or as grade 1–10 schools in a single building. What complicates these arrangements in the public system, especially when housed in a single building, is that separate provincial administrative units serve separate stages.

Formal entry into the primary level occurs at about age 6, but in many schools there is a kindergarten (*Kachi* class). Although not recognized officially with resources (teachers, books, or even space) in some regions, *Kachi* is nonetheless supported by teachers who feel "children need time to adjust to the discipline of school and because the first grade curriculum cannot be completed in a single year." A child enters this *Kachi* class at about age 5 or younger (and may stay more than one year), ideally completing the primary level by age 10 or 11. A study in NWFP found that *Kachi* classes constituted 25 percent of primary school enrollments, employed one-quarter of primary teachers (usually the youngest and most inexperienced). In addition, two-thirds of *Kachi* children learned in unsheltered environments (on school verandas and in the school yard). Recitation and copying constituted the bulk of the school day.

The *Kachi* class is important in any effort to increase access and persistence because of the heavy dropout that occurs in or shortly after this class. Indeed the high dropout in the *Kachi* class is not surprising given that the children suffer the worst conditions of primary education just as they are being introduced to schooling. In two-thirds of the schools in the study, more than half the children took more than one year to complete the *Kachi* level, at least partly because many are under-age (*Kachi* Study, Directorate of Primary Education, NWFP 1991).

[6] Variations on the public system include a system of schools for children of military personnel, and mosque schools that supplement religious studies with the primary curriculum taught by a regular primary teacher.

[7] The number of children is probably much higher. In Sind 74 percent of the schools do not include the *Kachi* children in their reported enrollments, compared to 41 percent in Punjab, and less than 5 percent in the other two (McGinn et al. 1989).

[8] These are followed by two years for undergraduate and two or three for postgraduate training. In Punjab the primary and middle stages are joined into an elementary level.

Primary education is severely underfunded and neglected in Pakistan despite numerous initiatives to improve its conditions. In 1980 the Pakistani government was spending 39 percent of the education budget (current expenditure not capital) on the primary level or 1.5 percent of GNP and by 1991 2.3 percent (UNESCO recommends 4 percent). It is hard to imagine a system that has deteriorated more. Yet Pakistani parents generally believe that schooling is the single most important factor in determining the future of their children, despite the fact that there is massive unemployment among even the highly educated.

Schooling participation

As noted, Pakistan's primary system consists of five or six years depending upon whether the *Kachi* class is counted as part of the program.

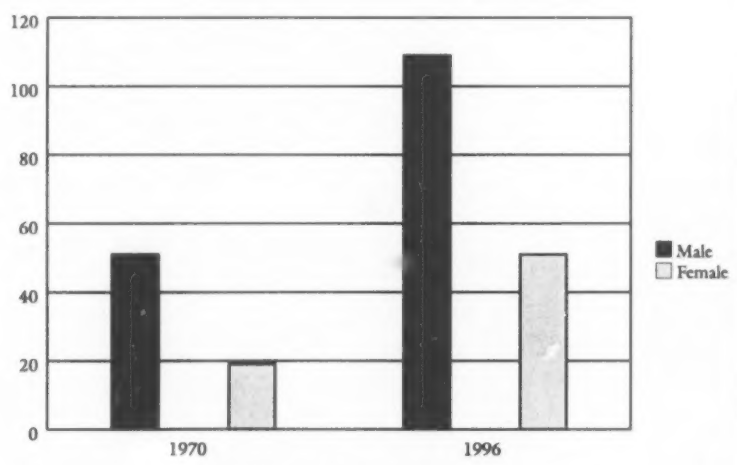
Preprimary

There is fairly substantial prepreprimary participation compared to other countries. In 1970 the gross preprimary enrollment was roughly 13 percent for males and 6 percent for females. In 1996 the comparable figures were 18 percent for males and 13 percent for females, and as noted above kindergarten children are variably counted in primary enrollments or not at all.

Primary level

In 1970 the gross enrollment rate in primary was roughly 51 percent for males and 19 percent for females. From 1975 gender gaps increased steadily to 58 points by 1996. In that year the gross enrollment rates were 109 percent for boys and 51 percent for girls. Net enrollment rates are not presently available because of the incomplete age data coming from schools. However similar "net primary school attendance" figures based on household surveys show the rates to be 71 percent for males and 62 percent for females. Recent intake rates were also not available in UNICEF/UNESCO data.

Fig. 2: Gross Primary Enrollment Ratios (%), Pakistan

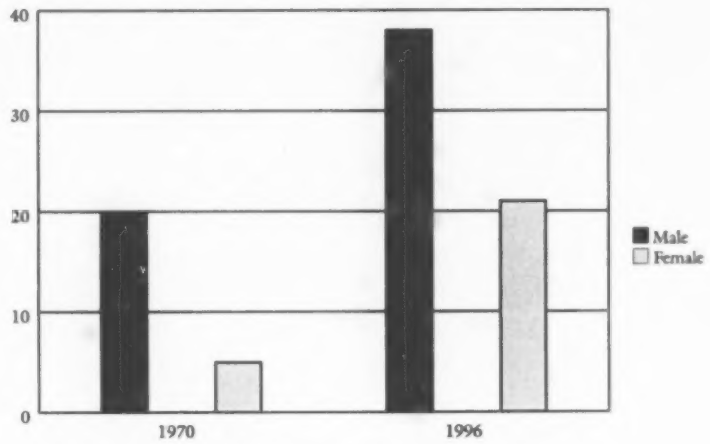


Source: unescostat.unesco.org/en/stats/stats0.htm

Secondary level

In 1970 gross secondary enrollment rates were roughly 20 percent for males and 5 percent for females. Again the gender

Fig. 3: Gross Secondary Enrollment Ratios (%), Pakistan



Source: unescostat.unesco.org/en/stats/stats0.htm

gap increases—this time more slowly—so that by 1996 the comparable figures were 38 percent for boys and 21 percent for girls. Again no net enrollments are available.

Transition rates from primary to secondary level

Only one-third of all children who complete primary education go on to higher levels (one-fifth of girls continue). A significant number of places at this level are provided by the private sector.

Higher education

Less than 10 percent of young people attend higher secondary (intermediate level), and only about 3 percent go on to degree courses. There are 21 government universities and 774 affiliated colleges in Pakistan.

Expectancy

The median number of school years completed for boys in the age range 15-19 years in 1990-91 was 3 and for girls it was less than one (World Bank Report, On-line. Available at: www.worldbank.org/research/projects/edattain/ggaps.htm).

Completion

Only 48 percent of entrants complete grade 5 of the primary level (data not disaggregated by gender). An analysis of 1991 Pakistan Integrated Household Survey (PIHS) data estimates that of children ages 10-14 who ever attended school, 60 percent of urban girls and 61 percent of urban boys completed primary. The comparable figures are 43 percent for rural girls and 53 percent for rural boys. Although these figures are low they nonetheless show a similar persistence on the part of girls and boys in urban areas. In rural areas a smaller gender gap is found in completion rates than exists in enrollment (Sathar and Lloyd 1994). Another estimate reports that in the two lowest literacy provinces only about one tenth (3 percent of all girls) complete primary in Balochistan and only one-third in NWFP, while boys' rates are almost twice as high (Benoliel, O'Gara, and Miske 1997).

Dropout[9]

An early study (Tauhuddin and Shah 1986) found that the highest dropout rates occurred at the *Kachi* level for both boys and girls. Together *Kachi* (kindergarten) and *Pakki* (grade 1) dropout constituted 41 percent of initial enrollment (40 percent for males and 43 percent for girls). Taken alone the *Pakki* rate was 12 percent for males and 14 percent for females. Boys' dropout rates continued to fall in grades 2 (10 percent), 3 (9 percent), and 4 (5 percent) while girls' rates decline in grade 2 (9 percent) and rise in grade 3 (13 percent) before falling at grade 4 (8 percent). Overall differences in urban/rural dropout rates or between boys and girls are not very large (Tauhuddin and Shah 1986).

Repetition

As was the case for dropout, repetition rates were highest (13 percent) in the *Kachi* and *Pakki* classes and then declined steadily until they were only 7 percent by grade 5. Girls' rates were consistently higher than boys' rates in all but *Pakki* class where they were the same (Tauhuddin and Shah 1986).

Girls' education issues

Pakistan has the second highest gender gap in the world after Yemen. Overall girls comprise roughly half the participation rate of boys. Although the problem is significant at all levels of the education system, there are major variations by region and urban/rural residence, and in every case the disadvantage in participation is female. For example, of children ages 7-14 who had ever attended school in the 1991 PIHS, Punjab had the highest participation rates overall in both urban (86 percent of boys and 81 percent of girls) and rural areas (80 percent for boys and 49 percent for girls). Sind had relatively high urban rates (81 percent for boys and 75 percent for girls) and low rural rates (62 percent and 29 percent). NWFP had fairly high rates for boys in both urban (86 percent) and rural areas (80 percent) compared to lower rates for girls (60 percent urban and 38 percent rural). Finally Balochistan had the lowest rates of all[10] in urban areas (62 percent boys and 38 percent girls) and rural rates (62 percent and 28 percent) close to those of Sind. Gender gaps ranged from a low of 5 percentage points in urban Punjab to a high of 40 percentage points in rural NWFP. NWFP also has the highest urban gender gap (26 percent) followed closely by Balochistan (24 percent) (Sathar and Lloyd 1994).

Education officials in Balochistan and NWFP often blame low girls' enrollment on the conservatism of parents, and the cultural and family

[9] It is difficult to obtain reliable repetition and dropout rates but overall they are thought to be high.

[10] Figures vary widely in Pakistan. Another source puts the enrollment ratios (perhaps they are net rates) at 45 percent of urban boys (ages 6-10) and 47 percent of rural boys compared to only 35 and 20 percent of girls in 1998-99 (Afridi n.d.).

traditions of early marriage and purdah. The Human Resource Surveys (HRS) however showed that in roughly 60 percent of villages a majority of parents wanted to educate their daughters and simply had no place to send them. Many parents were even ready to send their daughters to coed schools up to grade three, and were willing to have them taught by male teachers as long as they were local men trusted by the villagers (HRS in NWFP 1991 and Balochistan 1994).

Community norms undoubtedly play a part in the low participation of rural girls. Some parents are still unwilling to send girls to school no matter how protected or secure the facilities. Nor do they see any need for educating girls. For others in many areas of NWFP, Balochistan and rural Sind accessing primary requires that a girls' school be available.[11] PIHS data show that 18 percent of urban girls and 5 percent of urban boys age 7 to 14 do not have an appropriate school available within one kilometer. That number increases for rural children to 21 percent for girls and 9 percent for boys (Sathar and Lloyd 1994). Finding accessible facilities is an even greater problem in middle school where the enrollment of girls is considerably less than it is in primary school (ILO 1994). Girls' participation may also be affected by the inadequacy of facilities in existing schools. Of all schools in Pakistan 73 percent do not have toilet facilities (McGinn et al. 1989), 68 percent do not have safe drinking water, and 73 percent do not have electricity (Haq and Haq 1998).

One study found that the gender gap in cognitive achievement would be significantly reduced or even eliminated in Pakistan if the supply of primary schools were equalized for boys and girls (Alderman, Behrman, Ross and Sabot 1991). Overall there are about 121 schools for boys for every hundred for girls (McGinn et al. 1989: 3). In NWFP before the PED Program there were roughly 13 thousand primary schools of which 10 thousand were for boys and the rest for girls. In Balochistan the situation was worse: of roughly six thousand schools only 500 were for girls. In 1990, 21 percent (28 thousand) of all enrolled girls in Balochistan were attending boys' schools (and being counted as boys). Although opportunities have since been expanded, by the 1998/99 school year only 25 percent of the 9,622 schools in Balochistan were for girls.

Other factors also play a part in the low participation of girls, including the inability of some parents to pay the incidental and other fees associated with schooling. The provinces vary with regard to these costs. Fees are collected in almost all schools of Punjab and a fifth of schools in Sind, NWFP and Balochistan report that they collect fees (McGinn

[11] In general terms women have little mobility to move much beyond the confines of the household. One study (ILO 1994) however says that it is implicitly accepted that women can move as far as necessary to perform their daily tasks (e.g. to a water source or fuel collecting). They must be accompanied if any distance and there must be an apparent reason for the errand.

et al. 1989: 12). According to one study (Sathar and Lloyd 1994), parents report lower mean education expenditures for girls than boys in urban public schools (546 rupees per girl compared to 680 rupees per boy), in urban private schools (1,759 to 1,948) and in rural schools (367 to 431). This study was conducted at a time when the average per capita income was 9000 rupees (110–11). In all but Balochistan—where the government subsidizes book costs for rural children—parents must pay textbook costs. The pressure to keep costs low has led to deterioration in the quality of textbooks—both in materials and content. NWFP also relaxes uniform requirements for rural children whose parents cannot afford them.

Rural women have a high level of involvement in productive and household activities including the time-consuming activities of bringing water, collecting fuel and watching after livestock.[12] This means that the opportunity costs of educating girls are high.[13] Few participate in the "recognized labor force." An ILO study in NWFP (1994) found that roughly a quarter of the total population participated in the labor force in both rural and urban areas. However, while roughly 43 percent of urban males participated in NWFP only 3 percent of women participated, and in rural areas 42 percent of men and 6 percent of women. Consequently there are also few employed women available to act as motivating role models for girls' participation (Ud Din, Ali and Iqbal 1994).

Characteristics with no Effect on Achievement in Pakistan

- Children's social class
- Parents' literacy
- The quality of school facilities
- Teachers' preservice training

(Warwick and Reimers 1991)

The literature on girls' enrollment report a number of additional factors affecting participation in Pakistan (see Sathar and Lloyd 1994 for a discussion of these factors). Among them are mothers' or fathers' education, income levels, property holdings, domestic labor, birth order and family size. An analysis of PIHS data concludes that the most important determinants of whether a child attends school are parents' education and the level of household consumption. Mothers' education is more significant than fathers' education and it is more significant for girls (twice as high as when girls' mothers are illiterate in rural areas). Differences of 30 to 43 percentage points are found between the lowest and highest groups

[12] It has been estimated that the workload of rural Pakistani women averages 15 hours a day (ILO study 1994).

[13] Some sources report that the opportunity costs of marrying girls in terms of lost labor is not important enough to delay their marriage. They say that household work is not valued as much because it does not convert into cash (ILO Study 1994: 29). This suggests that reasons for early marriage such as shifting the burden of guarding a woman's honor to a husband is valued more than the lost household labor. One might conclude from this that if education provided more private returns to girls and their families it might also be worth the lost opportunity costs of their labor.

on this factor, and it is consistently more important for girls than boys. It finds that there is significantly higher enrollment also when "appropriate schools are available for girls in rural areas." Finally, although number of siblings has little effect on chances on enrollment, birth order does have an effect (first born girls have an advantage as do older boys in the family) (Sathar and Lloyd 1994).

What are the factors specifically affecting girls' primary completion? Again mothers' (not fathers') education increases completion rates by 10-20 percentage points, with the largest effects on completion rates of rural girls. The differences in income groups vary from 20 percentage points in urban areas to 38 percentage points for rural girls. In urban areas the presence of other siblings reduces the chances of completion and overall older children are more likely to complete schooling than younger ones. A nearby private school increases the chances of completion, a fact that the authors interpret as the effect of quality, or demand for quality education (Sathar and Lloyd 1994: 122).

Warwick and Reimers 1991 (Abstract 3) also looked at characteristics related to primary school completion. They found the best predictors of completion to be boys-only schools with male headteachers, high student enrollments, large numbers of teachers, school heads who were not full-time teachers and schools where students have relatively high scores on curriculum-based achievement tests. Physical facilities and visits by supervisors had no impact. In other words girls in girls-only schools with female teachers and female school heads were less likely to complete the primary levels. The authors conclude that:

> The research findings underscore the tight links between learning and completion. Students who master the material in the curriculum are more likely to complete five grades of primary school than those who do not. Thus reform efforts aimed at increasing learning have the double benefit of improving achievement and raising the rates at which students complete primary school (Warwick and Reimers 1991, Abstract 3: 4).

Of the factors affecting girls' enrollment and completion in Pakistan that are most amenable to change, the two most important appear to be providing appropriate, accessible opportunities and improving program quality.

Initiatives

A number of initiatives have been mounted to address the qualitative and quantitative problems of Pakistan's education system. The very difficult bureaucratic climate and the severity of the problems have led to creative initiatives to reform education, none of which at this point has fully

overcome the hurdles presented by governmental politics. Among these efforts are the now well known Community Support Program (CSP) and its successor PEQIP, the Sind Female Education and Community Initiatives Project, the Asian Development Bank's Girls' Project, the National Education Foundation Stipend Fund to encourage the creation of private alternatives for poor girls in Balochistan and NWFP, and a School Improvement Program in NWFP to improve the quality of the school program. The major umbrella under which a number of the reforms were first established in NWFP and Balochistan was the USAID initiated Pakistan Education Development Program (PEDP) and in Punjab and Sind ODA and World Bank supported projects.

This case study will briefly review the most prominent[14] initiatives affecting girls and then concentrate on describing the initiatives in the PED Program directed at improving the quality of primary education in NWFP. This initiative (compared with others) has never been fully described in the literature, partly because the abrupt closing of USAID projects in Pakistan cut the initiative short before its full impact could be shown. It is described here as an example of how an effective quality program can be mounted in a very short time under difficult circumstances and produce significant learning results.

Activities to expand primary opportunities

The GOP and various private groups have mounted a number of efforts in the past to expand educational opportunities. Most notable among them are: Mosque schools, Nai Roshni (Drop-In) Schools, and National Literacy Campaigns. In connection with the Asian Development Bank it has also built a network of well-endowed girls' schools.

Mosque school initiative

In 1978/79 Pakistan introduced the Mosque Schools Policy to increase the supply of schooling opportunities for children in villages without formal schools. The rationale for mosque schools was their relative low-cost and wide distribution, and the belief that parents would find mosques acceptable places for both boys and girls to study and that they would find the proximity and general physical amenities of mosques acceptable.

Mosque schools were staffed with regular primary teachers, teaching the regular curriculum, and using free materials, uniforms and writing supplies provided by the government. The schools were supervised by

[14] The initiatives undertaken in Pakistan over the last two decades are so numerous that it is only possible to consider a few of them. With the exception of one initiative in Sind the examples are taken largely from NWFP and Balochistan where female literacy rates are some of the lowest in the world.

the District Education Office. Imams received a stipend to teach religious subjects. There were short four-hour school days so as not to interfere with mosque prayers, and the course lasted three years after which qualified students could enter the formal system.

A study of the schools showed that they increased girls' participation in areas where no schools had been available before, where the schools were within 1 kilometer of girls' homes, and where imams encouraged the participation of girls. Other factors which did not affect participation were the attitudes of education officials, the poverty of girls' families, and the standard of buildings and equipment in the school (Anderson and Chaudhry 1989).

By 1986 mosque schools were estimated to have enrolled over 630 thousand students, most of them new students. Sind officials reported about 30 percent female enrollment. The Punjab program was less successful because, unlike Sind, communities tended to be large and populous and the bureaucracy was rigid and had difficulty accepting the schools. There was some doubt also whether the quality of the program was equal to that in public schools (Warwick, Reimers and McGinn 1989) Bureaucrats tended to see the schools as a necessary evil, and often received complaints from imams and community members who did not believe mosques should be used for schools (Personal experiences).

Living quarters for rural female teachers

The GOP also mounted initiatives to increase the number of female teachers willing to serve in rural girls' schools. At the time few local females were literate and those that were often did not qualify for placement in teacher training colleges. To address this issue the World Bank supported the construction of 320 residences for single teachers in Punjab, Sind, and NWFP and 10 cluster hostels for married teachers in Balochistan. Only the 10 hostels in Balochistan were used, while the others were never occupied or abandoned after a short time. The problem was the cultural difficulty of single women living alone and the fact that salaries were lower in rural areas so no one wanted to serve there (Warwick, Reimers, and McGinn 1989).

Alternative primary courses

A system of "drop-in" (Nai Roshni) schools was established for children 10 to 14 years of age who had never gone to school or had dropped out. Classes were held in government schools after hours for 3 hours a day for two years, after which, with successful completion of an exam, a child obtained a primary school certificate. Officials complained about the quality of the program and the politicization of teacher appointments

many of whom, it was claimed, simply took their salaries and did not teach.[15] They felt money could better be used in formal schools where the per student cost was less than Nai Roshni schools. In the end the schools only reached one-fifth of their intended target (Warwick, Reimers, and McGinn 1989).

UNICEF-assisted nonformal education projects in Pakistan

For a number of years UNICEF has supported NGOs in establishing alternative community schools built on the BRAC model but differing in important respects. The school can exist in areas within the range of formal schools, enroll children of an age eligible for formal schooling, and the schools may contain multigrade classes. UNICEF's policy changed in 1995 from direct support to the NGOs to assistance through the government, providing support for a bridging period to develop sustainable approaches. An evaluation of a sample of eight UNICEF-assisted NGOs with a total of 1,491 centers/schools in 1996 enrolling 59,049 girls and an additional small number of boys, reported that the schools provided roughly 85 percent of students with a "first chance at education." Overall on achievement tests (ABC tests adapted from BRAC for Pakistan), the NGO students obtained higher scores than government students in almost all tested areas but neither group achieved "mastery" level. Students had difficulty entering the formal level after primary completion because of distance, and age restrictions, making many communities want to expand the grades in their own schools. Community contributions have been most significant in the areas of parents encouraging girls to go to school and in monitoring teacher attendance. NGOs have been responsible for program quality (defined mainly as new teaching methods) but there are mixed reports about how effective they have been. Considerable resistance exists among teachers who cite the large classes and lengthy syllabus as making such programs difficult to carry out. Although it has been claimed that per-student costs are lower than in the government system, little reliable information is available of cost break-downs. Sustainability is a major weakness given NGO dependence upon outside assistance. While the government may be willing to pay many of the costs of schools, it has usually been reluctant to support NGO costs. The NGOs are believed to be critical in providing what is unique in the non-formal system: the involvement of the community and ensuring accessible low-cost education to educationally disadvantaged children (Baker and Muhammad 1997).

[15] Many politicians saw these schools as a way of satisfying constituents in a tight labor market.

The Sind Female Education and Community Initiatives project

This project was an NGO/CBO facilitated community-based primary education initiative to bring quality education to rural areas. The project, started in 1996, was supported by USAID and the Aga Khan Foundation, and was implemented through the Aga Khan Education Services in Pakistan (AKESP). The aim was to mobilize rural communities through women to provide for preprimary and primary education targeted at girls. Initial help was provided by AKESP but ultimately communities would take responsibility for their own schools. The achievements to date include 12 schools with 12 community-based education societies (CBESs) having the legal status to manage and operate educational programs. In this first group of villages a few of the CBES members were women (in a second group of communities, there are two new CBESs with all women members). Other achievements include the recruitment of all female teachers (paraprofessionals with intensive training), a low dropout rate for students (10 percent), and a partnership with 20 community-based organizations (CBOs) to train them to establish similar programs. Girls' enrollments were more than 50 percent in each school. What is unique in this program is the development of the teachers' moral and leadership role to take responsibility for the classroom. The program builds similar responsibility in the CBESs for financial and other support for schools. Some of the problems faced during implementation included: the difficulty at first of urban project staff and rural participants developing an equal partnership; the all-female nature of the project team in such conservative areas; the need to have community members broaden their definitions of community beyond ethnic, language, and other boundaries; and convincing parents that female candidates were available and could teach in local areas, that girls' quotas should be maintained, and that female teachers could be safely sent to residential training facilities in the city (Nabi and Jamal 2000). These achievements are all the more noteworthy because of the conservative nature of these villages.

The Asian Development Bank's Girls' project

In 1989, in support of GOP efforts to increase girls' primary participation and to improve the quality of their skills, the Asian Development Bank (ADB) approved a loan of $64.2 million for the Primary Girls' Education Project. The project had three main aims: institutional development to strengthen management and supervision of primary schools and train female teachers; infrastructural development to expand educational opportunities by providing physical facilities, furniture

and equipment; and innovative activities to enhance the participation and retention of rural female students in primary schools.

The centerpiece of the Bank's effort was construction of 980 community model schools (CMS) for girls in roughly 25 percent of all the rural Union Councils of Pakistan. The buildings were designed to have five classrooms, a headmistress room, a staff room, a store, toilets, and drinking water facilities. Five female teachers and a headmistress with higher qualifications were to be recruited and trained for each school. The schools were also intended to improve the quality of the program in a cluster of surrounding schools through the activities of a learning coordinator (LC) who would be posted to each CMS. A community committee was to manage the school and to mobilize local parents to send their daughters to attend school regularly.

The first phase project called for enrolling a half-million primary school girls, training 15,500 female primary teachers, absorbing 980 headmistresses, and providing the 980 five-room CMSs. However, only 41 percent of the target schools or 404 schools were completed. Some remained empty or half-empty because qualified female staff could not be found, or because surrounding areas did not support sufficient enrollment for such large schools. Training was provided to some of the CM staff, but since it was performed by units or individuals that normally train teachers, it could not be expected to improve on what was normally found in government primary schools. No effort in any case was made to assess learning results to see if actual improvements occurred.

Pakistan Education Development (PED) program

In 1989, USAID and the GOP agreed to work together to increase primary enrollments, especially of rural students and girls, and to improve the quality of primary programs[16] in Pakistan's two most educationally disadvantaged provinces—NWFP and Balochistan. PEDP was to last for 10 years and to be funded with a $280 million grant from the U.S. Government, which included large amounts for school construction (80 percent of the grant funds)[17] and smaller amounts for development of programs and instructional materials to improve the quality of education. Because Pakistan failed to meet the requirements of the Pressler Amendment for foreign assistance, the program was discontinued in 1994 after four years and an expenditure of $77 million.

[16] In retrospect PEDP was made into much more of a "girls' project" than it was ever intended to be. It was in fact an effort to increase primary enrollments as a whole. The phrase "especially of rural children and girls" was added as a reminder that this was where the problem was most extreme. The second main objective was to improve the quality of the primary program as a whole (not for girls in particular as recent reports claim).

[17] A conditionality of the PEDP grant was that the ratio of girls' to boys' schools should be 60: 40, but in actuality only 16% of construction in Balochistan and 40% in NWFP was for girls. Still despite official resistance 2,100 girls' schools where built in the two provinces.

What was unique about PEDP was that it was a program rather than a project, i.e., each year targets were agreed upon by USAID and provincial officials, and the directorates of education were required to achieve them before receiving their next tranches of support. The intent was to force results-focused efficiencies on existing institutions of education. One of the major efforts (not discussed here) was the bifurcation of the primary and secondary systems, a new institutional structure that permitted women to gain upper level management roles, and a decentralization of administrative and managerial functions to district and divisional levels. These changes had not been completed by the end of PEDP. To support changes throughout the system, PED provided technical assistance in management, curriculum development, teacher training, and research and assessment.

From 1988/89, when PEDP was established, until 1994, girls' enrollments increased by 30 percent in Balochistan and by 79 percent in NWFP, while boys' enrollments increased by 13 and 9 percent respectively. By 1994 there were 761,300 girls enrolled and 1.59 million boys.[18] This rapid rise in enrollment was said to have been accomplished largely by communicating an emphasis on enrolling girls through policy changes and activities, by opening schools for girls (a 70 percent increase to 2,100 in the two provinces), and by recruiting and training more female teachers for rural schools. However, according to one report, the repercussions on boys may have been more significant since more schools were constructed for boys than for girls.[19] According to the grant agreement the ratio of girls' to boys' schools should have been 60: 40, but only 16 percent of new school construction in Balochistan and 40 percent in NWFP was dedicated to girls. "Mixed" schools in Balochistan that girls attended were administered by the boys' school administration. In NWFP, the Primary Directorate freed itself from the requirement to build girls' schools by calling all new school construction "genderless" (Benoliel, O'Gara, and Miske 1997). These actions reinforce the fact that policy decisions taken in the face of resistant bureaucracies can in the end undermine the principles that they were intended to promote.

When USAID support was withdrawn in 1994, a number of activities were underway to improve the quality of the academic program. In

[18] It is difficult to draw the conclusion that PEDP is responsible for these increases for several reasons the steepest enrollment increase for girls came in the year *before* PEDP was established so perhaps a trend already existed to enroll more girls, under PEDP, EMIS systems were established that more accurately reflected school level enrollments (removing paper schools and in Balochistan calling girls in boys' schools boys), and most of the PEDP innovations that might have encouraged these changes were only beginning to have meaningful impact when it shut down. It does a dis-service to the lessons we might learn from the PEDP experience to attribute too much impact to its embryonic innovations.

[19] Girls' schools were more difficult to establish and nurture (with NGO help) than boys' schools.

Balochistan, these activities and the CSP component continued under the Balochistan Primary Education Project (BPEP), supported by World Bank, UNICEF, and European and Japanese bilateral funding under the country's Social Action Program (SAP). Between 1994 and 1999, BPEP continued to make significant gains for rural females in the province. Quality components in Balochistan included establishment of the Balochistan Instructional Materials Development Cell (BIMDC) to prepare primary textbooks, preliteracy materials (flash cards and bingo games), desktop publishing capacity, new printing procurement procedures, a resource library of illustrations for instructional materials, and textbooks and annotated teacher guides for math, science, Urdu, and Pashto for kindergarten and grade 1. The quality components for NWFP are described in more detail below. The following were some of the activities initiated under PEDP or in some cases that extended initiatives started by PEDP.

Main findings of the Human Resource Surveys of NWFP and Balochistan

The Surveys were conducted in 8,763 villages of NWFP and 9,003 villages of Balochistan to ascertain demand for girls' education and the resources available.

- In a majority of villages (60 percent in NWFP and 56 percent in Balochistan) more than half the parents want education for girls.
- Seventy-five percent of villages in NWFP and 57 percent in Balochistan have primary education opportunities for boys compared to 58 percent and 20 percent for girls
- Of villages where girls were enrolled 58 percent were in "boys" schools and 42 percent were in "girls'" schools in NWFP; and 16 percent were in "boys" schools and 4 percent were in "girls'" schools in Balochistan.
- Twenty-one percent of NWFP villages and 4 percent of Balochistan villages report academically qualified nearby females who could be teachers.
- Four percent of NWFP and 1 percent of Balochistan villages have middle school opportunities for girls compared with 11 percent and 6 percent for boys.
- Eighty-nine percent of NWFP and 37 percent of Balochistan villages have boys and 36 percent of NWFP and 3 percent of Balochistan villages have girls attending middle school somewhere.

Studies conducted in support of PEDP

It became apparent during the design of PEDP that education officials were not convinced of rural parents' demand for girls' education. Most felt that if parents sent their girls to school at all they would only send them to single-sex girls' schools with female teachers. If this were indeed the case, it would mean building two schools in every village and trying to find female teachers to staff rural girls' schools. With support from UNICEF and USAID, a human resource survey (HRS) was mounted in 8,763 communities in NWFP and 9,003 villages in Balochistan. The problem turned out not to be lack of demand for girls' education but lack of opportunities for girls, and parents turned out to be more flexible about coeducational schools in the early years and even male teachers. HRS served to inform policy

about girls' education and acted as a planning tool for identifying villages where with community support girls' schools could be established.

Other studies focusing on particular issues included: multigrade, kindergarten (*kachi*), teacher-related policies, assessments of results of experimental materials, teacher-content knowledge, assessments of achievement, etc.

Education management information systems (EMIS)

One of PEDP's first efforts was to establish a more reliable system for compiling and analyzing enrollment and other education data in both provincial primary directorates. This entailed studies of existing methods of managing information, data collections, and their uses, procuring hard and software, training computer operators and analysts, and developing ways to report the data in useful formats. Among the difficulties encountered were bifurcated bureaucracies for male and female schools (named for the sex of the teacher and the unit that supplied salaries) that counted students according to the sex designation of the school, an overlapping multiplicity of collection forms (some dating back to British formats), and some schools for which expenditures and other data came in, but which existed on paper only. Data became more reliable as a result of PEDP, but a weakness remained in using the data to inform policy.

Community Support Program (CSP) and its successor PEQIP

Balochistan has the lowest primary participation rates in Pakistan—especially for girls—and some of the lowest rates in the world. HRS demonstrated that not only were many parents willing to educate their daughters, but that many communities were willing to donate land for a school and had a teacher candidate in the area willing to teach. In 1993, the Society, a local NGO, was contracted to facilitate an arrangement between communities and the government to set up girls' schools in communities where no schools existed for girls. The Society developed a 14-step process that included selection and verification of the competencies of a female candidate, setting up school management committees (typically of five parents elected by 75 percent of the parents), and establishing the school. The school committee and teacher arranged temporary facilities, and after three months if enrollment and attendance were maintained, the teacher would be given a government post along with three months training and sets of instructional materials. The government in turn agreed to build a school after two more years of operation. Community members monitored the attendance of students and the teacher and solved problems that arose. By November 1994 when PEDP came to a close, 10 thousand girls were attending 198 CSP schools (in CSP villages 87 percent of age-relevant girls attend schools compared with 18 percent in the province as a whole).

The Primary Education Quality Improvement Program (PEQIP)

Started in 1996, shortly after the withdrawal of USAID support for PEDP, PEQIP's aim was to improve school quality through a collaborative relationship between NGOs, communities, and the government. PEQIP started with the teachers and support groups associated with the CSP schools. In 1996, there were 350 CSP schools and that number increased to 1,300 by 1999. PEQIP provided preservice and inservice training and classroom support to 1,800 teachers between 1996–99. In addition it provided needs-based supplementary materials to enhance quality, upgraded CSP female teacher qualifications through Open University programs, and strengthened village committees, NGOs, and others to support CSP. PEQIP provided education opportunities to almost 15 thousand girls ages 5–11, keeping their attendance high and their dropout low. Issues of continuing concern include how to sustain parental support for the schools and how to involve the government constructively in supporting quality education (PEQIP brochure). Other problems relate to difficulty in finding teachers for areas where schooling has never existed and consequently the reinforcement of inequities, the difficulty NGOs have in maintaining a high level of support to villages scattered at great distance from their home base, and the deterioration in quality of teaching that results from that inability to provide support. One suggestion was that Education Field Offices be established closer to the clients. Overall sustaining this kind of program is difficult because it increases recurrent costs substantially (Afridi 2000).

Girls' fellowship programs

In 1995 with support from the Balochistan Private Education Foundation, a private NGO helped 12 low-income communities in Quetta where no government schools existed to establish low-cost private primary schools for girls. Each community identified 200 to 300 girls from 4 to 8 years of age, and set up a parents' committee that was given money equivalent to 100 scholarships. They hired a private school operator to set up a school and find a teacher with a grade 10 pass (degree). The scholarships paid the costs of a teacher for every 25 girls and some incidental costs. The community enrolled 100 girls and put aside a small amount in a bank account each month as a cushion for when the subsidies stopped (after three years). Any school that had fewer than 50 girls lost its scholarship money, and although boys and older girls were able to enroll they were not counted for scholarships (World Bank Report No. 14960-Pak 1996). A similar system was also started in rural areas—often in communities that could not meet the criteria of CSP schools such as being able to identify a local female teacher. By 1996, 10 schools were still operating in Quetta and 30 in rural areas. The Habib Bank supported a similar project of home schools

for girls in slum areas of Pishin and Quetta. A similar NWFP program, run by the Frontier Education Foundation, established schools in rural areas. In 1994 the Foundation had an endowment of 100 million rupees provided by the government and 50 million provided by the PEDP Program (Benoliel, O'Gara, and Miske 1997).

PEDP model for improving quality in NWFP

The problems with program quality in NWFP seemed almost insurmountable at the start of PEDP. While urban schools were overcrowded and unsanitary, rural classes were often abandoned by teachers who either did not show up much of the time or turned over instruction to students to lead choral memorization drills. By policy fiat, pupil-teacher ratios were said to be 42: 1, but in fact varied up to more than 100: 1, and were rarely less than 50: 1 in the early primary classes of large communities. In smaller communities, classes were multigrade. Textbooks were not designed systematically, skipping important skill areas that would have made it impossible for children to, for example, read on their own. Expectations were so low for the infrequent regionally administered exams that the passing rates were set at 30 percent with some schools having no students who achieved that level. Attempts to decentralize education functions to divisional or district levels left dysfunctional units with no authority and little motivation to carry out oversight or supervisory functions in local schools.

Characteristics of female teachers in Pakistan

Researchers have wondered why students of rural female teachers in Pakistan achieve at significantly lower scores. There are several possible reasons: female rural teachers have less education than male teachers; many of the women did not take optional math after primary school while males were required to take it. Jatoi proposes that social class may contribute to the differences in student learning outcomes. Male teachers, she says, tend to be upwardly mobile and motivated (high status men would not accept the poor pay and the low status of teaching) while females who became teachers would be downwardly mobile (few jobs are open to women and those who came from educated families—would be the least well educated of these groups if they accepted teaching jobs). Her 1989 BRIDGES study concludes that persons from higher social classes do less well as teachers in the circumstances that exist in rural Pakistani schools. (Jatoi n.d.)

To aggravate the situation, the selection of teachers was highly politicized and consequently many were poorly qualified; and even those selected on "merit" did not fully comprehend primary level subject matter. Teacher training was ineffective and focused on memory work and lectures. A study showed that the achievement levels of students of trained and untrained teachers were basically indistinguishable (Warwick, et al. 1989). Another showed that teachers succeeded at the fifth grade exam at about the same rate (very low) as students (NWFP Directorate of Primary Education Report of Teacher Results on the Fifth Grade Exam 1994). Teachers

were poorly paid, unmotivated, and enjoyed a very low status. As civil servants, however, it was almost impossible to remove them. They could be absent 20 percent of the time on routine leave without penalty and many took extended leaves with impunity or did not show up for school at all (in "paper schools") but continued to be paid.

Separate administrative units for curriculum and training, and a supervision system for primary that operated out of the secondary system made it extremely difficult to coordinate the components of the primary level. Adding to the problem was the almost continual transfer/turnover of staff including officials in the highest positions. Newly installed officials made their mark by abandoning existing programs and starting in new directions.

PED's School Improvement Program (SIP) in NWFP

This section describes the PEDP approach to improving the quality of the primary program. It is described in the sequential steps of implementation to show how each of the relevant components of the education system were drawn into the process of reform.

General assessment

Activities got underway on quality components in the fall of 1991 with "solution-oriented" studies. School visits made it clear that at least two conditions contributed to the poor quality of instruction: the large class of kindergarten children who were neither recognized with resources nor provided appropriate learning materials, and the prevalence of multigrade classes that were difficult to teach with existing materials and teaching methods.[20] Supervisors were also not providing much support for teachers, nor monitoring learning in classrooms, while a quality program would require supportive supervisory staff feeding back information so that appropriate changes could be made in programs and materials. In addition to

School characteristics associated with higher achievement in Pakistan

- Urban location (not rural)
- Male-only or coed (not female-only)
- High enrollment (not low enrollment)
- High numbers of teachers (not low numbers)
- More textbooks
- High numbers of students per class (not smaller multigrade classes without subject specialist teachers)
- Teachers with higher levels of formal education
- Physical punishment reported.

(Warwick and Reimers, 1991)

[20] One study in 1989 found a significant difference in the achievement scores of fourth and fifth grade students in math and science who are learning in multigrade or single-grade classes. Students in single-grade classes had consistently higher scores in both subjects and grades than students in multigrade classes (Baloch N.d.).

a need for baseline information about conditions in schools, it seemed appropriate to use classroom studies as a way to train district staff in skills they would need to implement an effective instructional system.

Consequently *Kachi* (kindergarten) and multigrade studies were conducted by male and female assistant subdivisional officers (ASDEOs) from every district of NWFP. The ASDEOs were trained to observe classes and fill out classroom observation forms based on those used previously in BRIDGES studies. It was the first time most had spent time in classrooms observing rather than "inspecting" the education program. Data were collected in approximately 128 schools selected randomly from within 10 km of the subdivisional (SDEO) office. What the study lacked in "rigor" by having so many officials involved and using a limited sample, was more than made up for by insights the officials gained from classroom observations.

A number of the study findings related to teaching/learning conditions in classrooms. No instructional materials were designed specifically for the learning needs of *Kachi* children, and it was customary for instruction to consist of daily memorization and the recitation of letters and numbers and little else. No teachers were officially allocated to these students even though they constituted roughly a quarter of primary enrollment, and their class was usually the largest in the school (commonly 50–100 students). Partly as a result of the monotonous program, many children dropped out or repeated grades. Any effort to improve instruction in this class and other early primary classes would immediately affect the learning of all future primary children and might even encourage them to remain in school longer.

The multigrade study suggested further constraints in the teaching/learning environment (Directorate of Primary Education NWFP, Multiclass Study, n.d.). Teachers followed the textbooks closely but because they were so teacher-dependent, it was difficult to assign independent work to one set of students while instructing another. To solve this problem, the most conscientious teachers required students to memorize the book. Teachers also showed they were weak in knowledge of the subject content as evidenced by the numerous factual errors they made during class. Multiclasses showed large variations in the numbers and ages of students and, like the kindergarten classes, were deficient in instructional aids, materials, and classroom facilities. Supervision was infrequent and rarely if ever related to instructional support. From the studies, it became clear that improvement in the education program required new instructional materials that addressed the needs of these classes, specifically ones that improved student skills and were more user-friendly and less teacher-dependent.

Program development

The entry point for reform became instructional materials. An Instructional Materials Development Cell (IMDC) was established in the Directorate of Primary Education. The 13 staff consisted of promising young school teachers with high (B.A., B.Sc., or higher) academic qualifications and at least five years of primary school teaching so they would be familiar with classroom conditions. The aim was to produce textbooks and associated teachers' guides for the main academic subjects—math, science, Urdu, and Pashto— for kindergarten through grade 5.

The activity was supervised by a curriculum specialist provided by PEDP. Under her guidance, the IMDC staff mapped out the scope and sequence for the development of the materials based on official Pakistani curriculum objectives which, in the case of the kindergarten class, were beginning first-grade objectives.[21] They also prepared materials according to general education criteria related to conceptual complexity and the developmental levels of children. Practice questions accompanied each lesson and assessment items were distributed routinely through the text to assist teachers in gauging how well children were absorbing the intended skills. Attractive illustrations were prepared for the materials by local artists with familiar details and gender-balanced images of males and females. During development, the writers tried out lessons in nearby schools when concepts proved difficult.

When the *Kachi* texts were complete, they were checked for accuracy by Pakistani experts in the subject matters and then produced in low-cost black and white experimental editions. Accompanying the textbook was a teachers' guide with simple but complete instructions on how to teach each lesson. The lesson format was based on a six-step process, which was found in a 1989/90 BRIDGES study to be associated with higher student achievement in Pakistan. The steps included review of related topics, statement of the lesson objective, clear presentation of new materials with examples, guided practice, independent practice, and homework (this step was not included at the kindergarten level).[22] Training was made easy by teaching teachers how to use this format (they knew they could expect it with every lesson); answers were given in the guide to ensure correct responses. The detailed instructions helped move teachers away from an instruction based primarily on memorization; the lessons could not have been used in such a format because of the way they were set up. In developing the guides, the developers

[21] See A. Rugh and Malek, A.N. 1990. "Connectedness: A Missing Concern in Education Systems, The Example of Curriculum Development in Pakistan" Development Discussion Paper No. 347. Cambridge: Harvard Institute of International Development. This paper demonstrates that education goals, learning objectives, instructional materials, teaching and learning results do not relate to one another in a systematic way.

[22] The steps are roughly based on what Barak Rosenshine (1986: 60) calls "a pattern of instruction that is particularly useful for teaching a body of content or well-defined skills."

were forced to think clearly about the teaching methods that would produce the best learning results from their textbooks.

Experimental trials

When textbooks and guides were ready for trial, field-testing began in 248 schools of three districts. The IMDC staff spent a week in each district training *Kachi* teachers and supervisors (many of whom had been involved in the studies and therefore saw the innovations as the next step in a process they had initiated) in how to use the new student textbooks and teachers' guides. The simple three-part training consisted of trainers: demonstrating the "effective teaching practices" format used for each lesson, explaining the difficult concepts in the books, and giving teachers a chance to practice the "effective practices" format until they felt comfortable with it. In initial use of the materials, each teacher was assigned a single subject: math/science (in one book), or Urdu/Pashto. After six weeks, IMDC staff returned to the experimental schools to administer achievement tests to the students.

Teacher training was an important issue in this process. With nearly 50 thousand teachers in NWFP who might ultimately teach the materials, the IMDC staff was too small to train directly. A training program therefore had to be developed that was as time-saving and cost-efficient as possible. The task was difficult because the new methods were very different from the previous methods of rote instruction. The single-format lesson guide was one means by which the training could be simplified and made consistent. Another was the use of master trainers to relay the training to teachers in their own districts. An experiment was conducted during the first trials to find out if these trainers were able to introduce new materials as effectively as the IMDC developers. In a paired-school design, randomly selected teachers and their supervisors were trained for three days by IMDC staff. The supervisors in turn trained other teachers in nearby schools. Later the achievement scores of students were compared to see if the type of training given to the teacher made a difference in student learning. It did not, and thereafter the IMDC relied on supervisors in subsequent testing cycles to train new teachers. Already-trained teachers could try new subjects with a minimum of training since the lesson format remained the same. These training activities demonstrated to staff how program decisions could be based on objective data with cost-effective results.

Responsibility/accountability

In initial visits to schools, it was common to find children sitting doing nothing while their teachers sat under trees drinking tea. "Inspection" visits were so infrequent that teachers felt safe doing very little. During the trials, therefore, the IMDC staff organized supervisors and teachers

in a chain of responsibility for student learning. Teachers had the responsibility of seeing that students learned the materials, the learning coordinators (LCs) had the responsibility of supervising and supporting the teacher, the assistant subdivisional education officer (ASDEO) was responsible for training teachers and supervising LCs, and the subdivisional officer (SDEO) assumed overall responsibility for the subdistrict. Whether the system was working was immediately evident in the achievement results that were obtained at regular intervals from each classroom. All levels were held responsible for their roles in these results.

Assessment and feedback

Even before the trials were underway, the IMDC staff had set their own objectives and standards for the materials. The three objectives they decided upon were that the materials would: teach the skills required by the Pakistani curriculum, be of interest to the children, and be easily used by teachers in instruction. The standards they developed to indicate success included, for skills, that more than half of the classes in each district would get 75 percent or more average achievement scores and that each schooling context—urban, rural, girls, boys, large classes, small classes, multiclasses, and single-classes—would produce essentially the same results to show that no environment would be disadvantaged by using the new materials.

The objectives of student interest and the ease of teacher use were determined by observing and counting the number of students "engaged" in academic work while using the materials, and by interviewing teachers about their impressions and difficulties with the materials. The materials consistently met very high standards for both of these objectives. With one exception (Urdu classes in boys' schools of one district where the support system broke down) the materials also met the standards set for skill levels (Directorate of Primary Education 1994, "Formative Evaluation Study of *Kachi* Materials Developed by the IMDC," NWFP). One of the unexpected outcomes of the trials was that enrollments in the *Kachi* class increased significantly in the experimental schools and children advanced to later grades with very little dropout. Unfortunately these effects were not documented before USAID withdrew support.

The IMDC staff returned periodically to test the students in experimental classes, to feed back the results into their programs, and to provide additional training in areas where teachers had experienced difficulty. The tests constructed by the IMDC staff consisted of items similar to those in assessment sections of the textbooks being tested. If the teacher followed the teacher guide and taught the lessons as indicated, the children could accomplish the test easily. It became immediately clear during testing whether the children had been taught the new materials. If all the students of a class appeared to have difficulty on

the test (and other classes had high scores), then the teacher was asked to go for retraining by the master trainer supervisors. If many children had difficulty with certain test items, these parts of the books and teachers' guides were reviewed and improved by IMDC staff. Results were fed back to the districts and those supervisors and teachers who were responsible for the instruction of each class. An important result of these visits was the excitement that began to affect the developers, supervisors, and teachers as test results came in. It was no longer possible for teachers to do nothing, because the testing made it obvious whether they were doing their work or not.

When the kindergarten books reached final draft form after field testing they were reviewed by a committee from the Curriculum Wing in Islamabad, who approved them with minor changes for dissemination to NWFP. The IMDC staff revised the materials in line with the committee's recommendations. By the time USAID funding stopped, they were awaiting publication by the Textbook Board.[23]

The field testing process continued with twice-yearly introductions of materials, class by class and subject by subject in new and old districts, until materials up to the end of class 2 had been tested in more than 750 schools. The large number of experimental schools was a consequence of the need to build the skills of all district staff to support training, supervision, and assessment of the materials. As the experimental cycles became routine, it was possible to turn the work of sustaining them over to district officials with less frequent monitoring.

Even though new textbooks were turned out as rapidly as possible, it was clear that it would take a number of years before qualitative improvements would reach the higher primary classes. The Directorate of Primary Education in NWFP in discussion with the Curriculum Wing in Islamabad therefore decided to establish a National Education Assessment Program (NEAP) which they located in the IMDC in Peshawar. NEAP developed a bank of test items for Urdu, Pashto, math, and science in classes 3 and 5, which were administered to a sample of classes in NWFP to identify weaknesses (and strengths) in the instructional program. The results of this testing were very poor, and unfortunately there was not enough time available to intervene before USAID funding ran out.

Support components

During the IMDC trials, it was becoming apparent that the new instructional materials were only a beginning in making the intended quality improvements. Teachers still had to cope with large numbers of students

[23] Later however after the USAID funded program came to a close the books were again reviewed and substantially changed.

and multigrade classes, and many were not themselves competent in some of the basic concepts and instructional techniques required to teach primary school students. To resolve some of the classroom deficiencies, "excellent" teachers and supervisors from the field were invited to spend their holidays in the IMDC developing short training units on, for example, how to manage large numbers of children to improve the conditions of instruction, how to use simple audiovisual materials like those created by some of the teachers, how to teach young children beginning math and languages, and how to teach effectively in multiclass situations. The excellent teachers and supervisors also assisted regular staff in developing support materials that included alphabet and number friezes and plastic blocks,[24] and topographical maps. To support multigrade teachers and enrich classroom learning, the IMDC developed three "library" boxes consisting of 150 reading passages with questions and answers organized into three color-coded learning levels, math problems, and science materials. These materials all had accompanying instructions to indicate how they could be used by students in self-instruction.

NWFP preservice and inservice teachers results on grade 5 exams

Class 5 achievement tests were administered to (pre and post) preservice students and inservice teachers to determine their level of primary-level content knowledge.

- In math and science, most preservice entry students and inservice teachers obtained low results.
- In Urdu, preservice entry students and inservice teachers did somewhat better but did not achieve full primary level mastery.
- By the end of the year trainees still had not achieved mastery of math and science and fewer had not mastered Urdu.
- The longer the entry-student's or inservice teacher's academic training, the higher the scores.
- Females scored about the same as males on Urdu and science, but less well on math; controlling for years of academic training, females outperformed males on science and Urdu and at the matric (Grade 10 diploma) level in math.
- Female teachers on average had considerably fewer years of academic training than males (35 percent females to 60 percent males completed Matric) and many fewer (10 percent female to 50 percent male) had science degrees.
- Lengthy inservice improved math and science scores (over entry level preservice students but not over preservice graduates) but did not improve Urdu scores.
- Teaching class 5 increased math and science scores.
- There were no significant differences between trained and untrained teachers.

(Directorate of Primary Education n.d.).

In June 1993, to address the need for teacher support programs and to develop a new English program requested by the Minister of Education, the IMDC invited the Curriculum Bureau (which was now willing to become involved) to open a branch office (CBB) on its premises. With the four new positions, the IMDC became large enough for staff to develop

[24] The plastic blocks were developed independently by one of these superior teachers, and IMDC helped to fund production of them on a large scale.

specializations that until then had been covered by all staff members on an ad hoc basis. Of the new CBB staff, one specialized in English program development, one in materials-specific teacher training, one in testing and one in evaluation. Two members of the old IMDC staff became an evaluation unit charged with supervising, coding, entering, and analyzing data brought from the field. The rest became subject specialists.

Involving relevant agencies

BRIDGES studies demonstrated that students of teachers graduating from preservice training programs had no higher achievement than students of untrained teachers. It was, therefore, important to address weaknesses in preservice training programs or the inservice teachers would always be in need of rehabilitation. In the fall of 1993, largely as a result of the new CBB staff, it became possible for the first time[25] to conduct a test of entering students in the teacher training colleges. The tests were given in all 18 training colleges for the same reason that motivated other PED activities, that the more relevant officials were involved in data collection the more widely would new insights be absorbed. There was initial amusement on the part of the college instructors that the tests being administered to the mostly tenth grade graduates were class 5 primary terminal exams (produced by NEAP). There was not so much amusement when spectacularly poor results came back.

Faced with the results, some of the instructors agreed to use training units newly developed by the IMDC to teach primary subject content while others agreed to hand out the IMDC units to their students even if they themselves would not teach the units in class. As they all pointed out, the Primary Teaching Certificate (PTC) curriculum emphasized method and not subject content, and therefore the curriculum for the training colleges would have to change officially if the units were to become a permanent part of the training. Unfortunately, although the main Curriculum Wing in Islamabad responsible for such matters was considering changes in the curriculum of the colleges, the changes did not occur before USAID support for PED ended.

A premature end

The USAID-PED program lasted four years instead of the intended 10. By the time funding ended in 1994, a number of activities were underway to improve program quality in a context previously considered "resistant" to change. By the end of the program, educators were

[25] The training institutions come under the authority of a separate Curriculum Bureau located in a remote area of the province.

discussing the programmatic aspects of "quality" with understanding, and were ready to support the continuation of a number of activities of the program. Four years, however, were not enough to establish the routines of reform or to involve all the parts of the bureaucracy needed to effect comprehensive change. The most resistant were the "semi-autonomous" organizations: the Textbook Board with its vested interest in maintaining the old textbooks and the Curriculum Bureau. which saw each step toward cooperation as a relinquishment[26] of power even though in the end they established a branch office in the IMDC. While it was relatively easy and in fact welcomed to experiment at the grassroots level, it was more difficult to win approval from higher officials. These chiefs tended to view innovations as opposed to their own personal interests in developing and profiting from existing materials and training. The Federal Curriculum Bureau, however, became interested in redefining curriculum objectives more clearly, and gave its stamp of approval to IMDC materials, although in the end it could not overcome resistance at the provincial level. Among higher officials, consequently, much depended on personal interest in the activities. Unfortunately, time ran out and a new set of donors and players took over with other agendas.

When it became apparent that USAID funding and technical assistance would end, sustainability became an issue. Although an umbrella donor support group agreed to provide funding, a hiatus of a year before funding commenced erased a number of the institutional arrangements and skills carefully nurtured over the previous four years.[27] The PED staff turned their attention to securing permanent positions for IMDC staff and to addressing other issues that immediately threatened the collapse of the new program.[28] Discouraging as this may have seemed, PEDP rediscovered the truism that once a process is set in motion, the situtation can never be the same. The program helped people "see" things differently, new institutional arrangements were formed, and new expectations were created. Once started along a path toward well-defined objectives, the process of reform took on a life of its own. Many of the systems and skills that PEDP developed were retained or have been incorporated into new activities.

[26] The establishment of a CBB Office in the IMDC during the tenure of a sympathetic director allowed cooperation for a time but the CB still remained passive with regard to reform of its ineffective training colleges.

[27] At that time GOP funding was allocated at more than 95 percent to salaries, and very little else. Since then the sum for non-recurrent development costs has risen considerably.

[28] For example, there was a question of how district supervisors would carry on classroom testing when even paper was not available to them. To address this issue IMDC staff developed a monitoring handbook with test items that could be held up in front of a class while students wrote answers on their slates.

In the end the experience of PEDP's quality component in NWFP illustrated the importance of:

- a systems' approach that draws components of the education program into logical relation to one another all focusing on learning results
- choosing an entry point to the system that is core to improving results (in this case instructional materials)
- setting up supportive systems for innovations that are minimalist in design (low cost and self-evident)
- providing all the relevant actors with appropriate experiences in implementation (rather than talking about it)
- testing innovations on a small scale to ensure they work
- setting up a process for reform but giving space for counterparts to decide their own content, methods, and standards and whether or not to expand the experiments they have experienced
- being opportunistic in seizing the right moments to involve others who suddenly become ready to participate

Conclusions

Pakistan offers an example of innovations mounted in a country with some of the poorest education indicators in the world and certainly some of the most difficult and unpromising circumstances in which to attempt reforms. Girls enter the primary stage at lower levels than boys; they dropout and repeat at higher levels and complete a median of less than one year in school. Dropout therefore peaks for both boys and girls at the kindergarten-grade one level by which time almost one-half of entering children leave school. The main reasons for the low participation of girls are the lack of appropriate schooling opportunities and the poor quality of the primary program, especially in the early years of primary.

Two initiatives with potential for increasing the participation of girls are the CSP program in Balochistan that expanded girls-only schools in conservative areas, and the SIP program that improved the learning program in the early grades in NWFP. Both programs had in common a careful process for involving participants. The Community Support Project involved parents in a way that defused their distrust of government and their sense of schools as alien institutions, and brought them to a point of ownership and interest in ensuring that the school functioned well. SIP involved staff of the education bureaucracy in their

relevant capacities with reform so that as insights developed staff were involved in uncovering them and following up with reform activities. Staff training was "experiential" and not something learned in theory during workshops. CSP was able to effect high levels of girls participation in communities where its schools operated, and SIP proved effective in raising learning levels and making programs interesting in schools where SIP programs were used. USAID withdrew from Pakistan before definitive results were obtained, but before this happened observations showed more children being drawn into school and staying through the early grades with better learning results.

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Starting Now: Strategies for Helping Girls Complete Primary

by Andrea Rugh

This study is intended as a practical reference for educators interested in helping girls stay in school to the end of the primary level. The information and approaches presented are a distillation of existing literature and field experience.

The argument underlying this paper is that investing in girls' education (and increasing the returns on this investment for nations and families) requires that attention be paid to balancing access and quality. Even more, improving program quality and the modes of the delivery of education are the most cost-effective ways to expand access to educational opportunities, and ensure that children—especially girls—will want to stay in school until the end of the primary level.

Andrea Rugh, Ph.D., is a researcher and educator with more than thirty years of experience working in developing countries in Africa, Asia, and the Middle East.

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